



**MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4)
COMPLIANCE AUDIT**

**STATE OF CALIFORNIA,
DEPARTMENT OF TRANSPORTATION**

**REPORT DATE:
February 26, 2010**

**EVALUATION CONDUCTED:
October 5–7, 13–14, and 21–22, 2009**

Conducted for:
**U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901**

and

**State of California
Water Resources Control Board
Storm Water Program
P.O. Box 100
Sacramento, CA 95812-0100**

CONTENT

	Page
SECTION 1.0 INTRODUCTION.....	1
SECTION 2.0 PERMIT COMPLIANCE REVIEW	11
SECTION 2.1 PROGRAM MANAGEMENT	11
SECTION 2.2 POST-CONSTRUCTION PROGRAM MANAGEMENT.....	12
SECTION 2.3 CONSTRUCTION PROGRAM MANAGEMENT	13
SECTION 2.4 MAINTENANCE PROGRAM MANAGEMENT	18
<i>Section 2.4.1 Highway Maintenance Facilities.....</i>	<i>18</i>
<i>Section 2.4.2 Highway Surveillance Activities and IC/ID Detection Program.....</i>	<i>24</i>
<i>Section 2.4.3 Highway Maintenance Activities - Storm Water Drainage System Facilities Maintenance and Slope Stabilization</i>	<i>28</i>
APPENDIX A: AUDIT SCHEDULE	
APPENDIX B: EXHIBIT LOG	
APPENDIX C: PHOTOGRAPH LOG	
APPENDIX D: CONSTRUCTION PROGRAM SITE VISIT REPORTS	
APPENDIX E: MAINTENANCE PROGRAM SITE VISIT REPORTS	
APPENDIX F: CALTRANS MS4 PERMIT (SWRCB Order No. 99-06-DWQ)	

Section 1.0 Introduction

On October 5–7, 13–14, and 21–22, 2009, the U.S. Environmental Protection Agency (EPA), representatives from the State Water Resources Control Board (SWRCB), representatives from six different Regional Water Quality Control Board (RWQCB) offices, and EPA’s contractor, PG Environmental, LLC (hereafter, collectively, the EPA Audit Team) conducted an audit of the State of California, Department of Transportation (Caltrans), Municipal Separate Storm Sewer System (MS4) Program in Districts 1 through 4 in northern California. Discharges from the Caltrans MS4 are regulated under the *National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, SWRCB Order No. 99–06–DWQ (hereafter, the Permit), issued July 15, 1999. Caltrans was first permitted under an NPDES MS4 permit issued by the Los Angeles RWQCB in 1990, and it has been developing its MS4 Program since that time.

The Permit authorizes Caltrans (the Permittee) to discharge storm water runoff and certain non-storm water discharges from Caltrans-owned rights-of-way, properties, facilities, and activities, including storm water management activities in construction, maintenance, and operation of state-owned highways in California. As explained in the Fact Sheet, the Permit is intended to cover all municipal storm water activities conducted by Caltrans throughout the state of California, in both areas that require an MS4 permit and areas that do not currently require a permit. It is also intended to cover all Caltrans construction activities that require a permit under the state regulations. Although Caltrans operates a statewide program, the EPA audit focused on only the following Caltrans districts: District 1 (North Coast region), District 2 (Northern Central Valley and Far Northeastern region), District 3 (Sacramento area), and District 4 (San Francisco Bay area).

Caltrans manages approximately 50,000 miles of California’s highway and freeway lanes, provides inter-city rail services, and permits more than 400 public-use airports and special-use hospital heliports. Caltrans is divided into six transportation mobility programs—Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration, and the Equipment Service Center. The EPA audit included only the Highway Transportation program within its scope.

The primary purpose of the audit was to assess Caltrans’ compliance with the requirements of the Permit through an assessment of Caltrans’ implementation of its current Storm Water Management Program (SWMP). The audit schedule is presented in Appendix A.

Specifically, the audit included an evaluation of the Caltrans’ compliance with the following Permit components:

Provision F

Post-Construction Management

Provision G	Program Management
Provision H	Construction Program Management
Provision I	Maintenance Program Management
Provision I.1	Highway Maintenance Activities
Provision I.2	Highway Surveillance Activities and Illicit Connection/Discharge Detection Program
Provision I.3	Highway Maintenance Facilities
Provision K	Program Evaluation and Reporting

The EPA Audit Team evaluated compliance through a series of interviews with representatives from Caltrans headquarters, Caltrans Districts 1–4, and various contractors, along with a series of site visits, record reviews, and field verification activities. The Caltrans headquarters session was held to determine the role of headquarters in establishing a uniform statewide program, and to assess the Program Management, Program Evaluation, and Monitoring components (Provisions G and K of the Permit). The primary representatives involved in the audit were the following:

Caltrans Headquarters: October 5, 2009

Caltrans Headquarters Representatives	Scott McGowen, Chief Environmental Engineer Joyce Brenner, Storm Water Implementation Karl Dreher, Storm Water Program Development Keith Jones, Environmental Engineering Liaison Parvis Lahai, Office Chief of Maintenance Tim Sobelman, Office Chief of Design Chuck Suszko, Office Chief of Construction Engineering
Caltrans Headquarters Consultant	Anna Lantin, RBF Consulting
State Water Resources Control Board Representatives	Jaime Favila, Environmental Scientist Walt Shannon, Municipal Storm Water Chief Leo Sarmiento, Senior Engineering Geologist
Regional Water Quality Control Board 5 Representatives	Marty Hartzell, Engineering Geologist Steve Rosenbaum, Senior Engineering Geologist
EPA Region 9 Representatives	Greg Gholson, Environmental Scientist Amy Miller, Team Leader
EPA Contractors	Scott Coulson, PG Environmental, LLC Jared Richardson, PG Environmental, LLC Bobby Jacobsen, PG Environmental, LLC Luz Falcon-Martinez, PG Environmental, LLC

District 1: October 21–22, 2009

Caltrans Representatives	Joyce Brenner, Storm Water Implementation David Melendrez, Branch Chief Alex Arevalo, NPDES Storm Water Coordinator Brett Johnson, Maintenance Storm Water Coordinator Walt Dragaloski, Construction Storm Water Coordinator Wyatt Harris, Assistant Maintenance Storm Water Coordinator
State Water Resources Control Board Representative	Walt Shannon, Municipal Storm Water Chief
Regional Water Quality Control Board 1 Representatives	Mona Dougherty, Water Resources Control Engineer Jeremiah Puget, Caltrans Liaison
EPA Region 9 Representative	Greg Gholson, Environmental Scientist
EPA Contractors	Scott Coulson, PG Environmental, LLC Bobby Jacobsen, PG Environmental, LLC

District 2: October 13–14, 2009

Caltrans Representatives	Joyce Brenner, Storm Water Implementation John Bulinski, District Director Miguel Villicana, NPDES Coordinator Mark Harvey, Maintenance Storm Water Coordinator Brian Adams, Construction Storm Water Coordinator David Melendrez, Branch Chief
State Water Resources Control Board Representatives	Leo Sarmiento, Senior Engineering Geologist
Regional Water Quality Control Board 5 Representative	Andrew Jensen, Environmental Scientist
EPA Contractors	Jared Richardson, PG Environmental, LLC Luz Falcon-Martinez, PG Environmental, LLC

District 3: October 6–7, 2009

Caltrans Representatives	Joyce Brenner, Chief Storm Water Implementation Nora Hogan, Maintenance Storm Water Coordinator Darrell Naruto, NPDES Coordinator Kevin Evart, NPDES Coordinator Leslie Case, NPDES Coordinator Doug Coleman, Chief Environmental Engineering Rusty Grout, Regional Maintenance Manager Ken Murray, Senior Landscape Architect Wes Faubel, Design Storm Water Coordinator Kirk Carrington, Construction Storm Water Coordinator Dusty Shell, Construction Storm Water Coordinator
State Water Resources Control Board Representatives	Jaime Favila, Environmental Scientist Leo Sarmiento, Senior Engineering Geologist
Regional Water Quality Control Board 5 Representative	Marty Hartzell, Engineering Geologist
EPA Contractors	Jared Richardson, PG Environmental, LLC Luz Falcon-Martinez, PG Environmental, LLC

District 4: October 6–7, 2009

Caltrans Representatives	Hardeep Takhar, District Office Chief Norman Gonsalves, District Storm Water Coordinator Dragomir Bogdanic, Construction Storm Water Coordinator Keith Jones, Environmental Engineering Liaison David Yam, Erosion Control Coordinator Robert Sorenson, Maintenance Storm Water Coordinator Kamran Nakhjiri, Water Pollution Control Coordinator
Regional Water Quality Control Board 2 Representative	Brendan Thompson, Caltrans Liaison
EPA Contractors	Scott Coulson, PG Environmental, LLC Bobby Jacobsen, PG Environmental, LLC

In addition to the record review and interviews, the EPA Audit Team conducted approximately 55 individual site visits of maintenance facilities, activities, and construction sites located in the Caltrans-owned rights-of-way and/or served by the Caltrans MS4 in Districts 1 through 4. The purposes of the individual site visits were (1) to assess the adequacy of best management practices (BMPs) employed by Caltrans at maintenance facilities and at construction sites to prevent and reduce storm water pollution, and (2) to gauge the overall effectiveness of Caltrans' oversight of storm water compliance at its construction and maintenance sites.

The EPA Audit Team conducted the site visits with Caltrans personnel also participating. Observations related to a select number of these site visits are included in Section 2.0 of this Audit Report and Appendixes D and E. Table 1 provides a list of the Caltrans facilities and activities at which site visits were conducted.

Table 1. Site Visits Conducted October 6–7, 13–14, and 21–22, 2009

Caltrans District	Facility/Activity Site Name	General Location	Facility Type	Site Visit Report No. ¹	Date
1	Last Chance Grade Roadway Construction Project	About 2.5 miles north of the intersection of Highway 101 and Wilson Creek Road in Del Norte County, CA	Construction	9	10/21/2009
1	Smith River Safety Roadway Construction Project	Post mile 43–45 on Highway 101 North, Del Norte County, CA; About 15 miles north of Crescent City, Del Norte County, CA	Construction	12	10/21/2009
1	Willow Creek Maintenance Facility	Post mile 0.6 Highway 96, Willow Creek, CA	Maintenance	16	10/22/2009
1	Bracut Maintenance Facility	6100 North Highway 101, Eureka, CA	Maintenance	21	10/22/2009
1	Garberville Highway Maintenance Facility	Redwood Drive, Garberville, CA 95542	Maintenance	22	10/22/2009
1	Berry Summit Sand Storage Facility	Post mile 34.1 Highway 299, Willow Creek, CA	Maintenance	23	10/22/2009
1	Crescent City Maintenance Facility	711 North Highway 101, Crescent City, CA	Maintenance	24	10/21/2009
1	Confusion Hill Bypass Project	On Route 101, approximately 5 miles north of Leggett, Mendocino County, CA	Construction	N/A	10/22/2009
1	Seven Culverts Project	On Route 101, approximately 11 miles north of Leggett, CA, near the Mendocino/Humboldt County border	Construction	N/A	10/22/2009
1	Rio Dell Rehabilitation Project	On Route 101, in Rio Dell, Humboldt County, CA	Construction	N/A	10/22/2009
1	Alton Interchange (EA No. 290304)	Route 101/36 interchange approximately 2 miles south of Fortuna, Humboldt County, CA	Construction	N/A	10/22/2009

¹ The Site Visit Report Number corresponds to the site visit report included in either Appendix E or Appendix F. Construction site visit reports are included in Appendix E, and Maintenance facility site visit reports are included in Appendix F. N/A means “not applicable,” indicating that photographs and notes were collected and obtained, but detailed site visit reports were not produced.

Table 1. Site Visits Conducted October 6-7, 13-14, and 21-22, 2009 (Continued from previous page)

Caltrans District	Facility/Activity Site Name	General Location	Facility Type	Site Visit Report No.	Date
1	Vactor Decant Area	On Route 101, approximately 7 miles north of Garberville, Humboldt County, CA	Maintenance	N/A	10/22/2009
1	Temporary Sweeper Waste Storage Location	Near intersection of Little River Drive and Highway 101 about 10 miles north of Arcata, CA	Maintenance	N/A	10/22/2009
2	Thomes Creek Bridge	Approximately 3 miles north of Corning, CA at the Interstate 5 Thomes Creek bridge crossing in Tehama County	Construction	1	10/13/2009
2	South Avenue On-ramp	Approximately 3 miles south of Corning, CA at the South Avenue and Interstate 5 interchange in Tehama County	Construction	2	10/13/2009
2	Fountain Curve Rehabilitation Project	Shasta County, on Highway 299 East of Redding, between post miles 51.8 and 52.2	Construction/ Maintenance	3	10/14/2009
2	Salver Roadway Realignment Construction Project	Post mile 2.2-2.5 on Highway 299 in Trinity County, CA	Construction	4	10/22/2009
2	Top of Buckhorn Project	Approximately 25 miles west of Redding, CA on State Highway CA-299 near the intersection of Hoadley Peaks roadway in Shasta County	Construction	7	10/14/2009
2	Yankee Gulch Project	Approximately 17 miles west of Redding, CA on State Highway CA-299 east of the intersection of Lewiston Turnpike roadway in Shasta County	Construction	8	10/14/2009
2	Dana to Downtown Project	Redding on I-5 from .1 km north of hartnell overcrossing to .9 km north of hilltop drive overcrossing and on route 44 from pine street to .2 km west of 5/44 separation	Construction	13	10/14/2009

Table 1. Site Visits Conducted October 6-7, 13-14, and 21-22, 2009 (Continued from previous page)

Caltrans District	Facility/Activity Site Name	General Location	Facility Type	Site Visit Report No.	Date
2	O'Brien Rest Area	North of Redding on I-5; post mile 31.10 near Shasta Lake	Maintenance	25	10/13/2009
2	Lake Boulevard Temporary Storage Site	Near the intersection of I-5 and Highway 299 (Lake Boulevard East)	Maintenance	26	10/13/2009
2	Red Bluff Maintenance Station (new) Project	Off of Hess Road near intersection with Interstate 5 (exit 651), Tehama County, CA	Construction	N/A	10/13/2009
2	Red Bluff Maintenance Station	13700 State Highway 36 E, Red Bluff, CA, 96080 in Tehama County, CA	Maintenance	N/A	10/13/2009
2	China Slide Project	Post mile 13.4 on Highway 299 in Trinity County, CA	Construction	N/A	10/14/2009
2	Buckhorn Sandhouse Facility	On State Highway CA-299, approximately 26 miles west of Redding, CA in Trinity County, CA	Maintenance	N/A	10/14/2009
2	Old Maintenance Disposal Site	Maintenance disposal site located on State Highway CA-299, approximately 20 west of Redding, CA in Shasta County, CA	Maintenance	N/A	10/14/2009
2	Shasta River Bridge Project	Near Weed, CA	Construction	N/A	10/14/2009
2	Redding Maintenance Yard	1450 George Drive, Redding, CA	Maintenance	N/A	10/13/2009
2	Salt Creek Sandhouse	Interstate 5, post mile 37.5	Maintenance	N/A	10/13/2009
2	Temporary Vector Waste Storage Site	Interstate 5 and Sweetbrier exit	Maintenance	N/A	10/13/2009
2	China Slide Roadway Construction Project	Post mile 13.4 on Highway 299 in Trinity County, CA	Construction	N/A	10/22/2009
3	Nicolaus Bypass Project	Highway 70 roadway project from intersection with Feather River Boulevard to approximately Rio Osa Road, Yuba and Sutter Counties, CA	Construction	5	10/7/2009

Table 1. Site Visits Conducted October 6-7, 13-14, and 21-22, 2009 (Continued from previous page)

Caltrans District	Facility/Activity Site Name	General Location	Facility Type	Site Visit Report No.	Date
3	Lincoln Bypass Project	West of intersection Twelve Bridges Drive and SR-65 north to Nicolaus Road, Placer County, CA	Construction	6	10/7/2009
3	Tudor Bypass Project	Realignment SR-99 from intersection with Hull Road to intersection with Wilson Road, Sutter County, CA	Construction	14	10/7/2009
3	Marysville Maintenance Station	1001 North Beale Road, Marysville, CA	Maintenance	20	10/7/2009
3	Temporary Storage Site near Colusa, CA	NW of the Colusa Maintenance Facility on Route 20	Maintenance	27	10/7/2009
3	Special Crews Yard	1403 Furneaux Road, Marysville, CA	Maintenance	N/A	10/7/2009
3	Colusa Maintenance Yard	1401 Will S Green Avenue, Colusa, CA	Maintenance	N/A	10/7/2009
4	Isabel Avenue/Route 580 Interchange Project (EA No. 17334)	Route 580 and Portola Avenue Extension in Alameda County, CA	Construction	10	10/7/2009
4	Sunol Grade/Route 680 Roadway Rehabilitation Project (EA No. 253794)	Scott Creek staging yard located west of Route 680 at the Scott Road interchange near the Alameda-Santa Clara County boundary	Construction/ Maintenance	11	10/7/2009
4	Sunol Grade/Route 680 Roadway Rehabilitation Project (EA No. 4A5204)	West of Route 680 at the Vargas Road interchange, Alameda County, CA	Construction	15	10/7/2009
4	Washington Waste Storage Site	Near the Washington Boulevard exit along Highway 880 North in San Leandro, Alameda County	Maintenance	17	10/7/2009
4	Livorna Waste Storage Site	Approximately post mile 10 along Highway 680 North near the Livorna exit in Contra Costa County	Maintenance	18	10/7/2009
4	Schaefer Ranch Waste Storage Site	Approximately post mile 25 along Highway 580 West in Alameda County	Maintenance	19	10/7/2009

Table 1. Site Visits Conducted October 6-7, 13-14, and 21-22, 2009 (Continued from previous page)

Caltrans District	Facility/Activity Site Name	General Location	Facility Type	Site Visit Report No.	Date
4	Route 92/880 Freeway Interchange Project (EA No. 016014)	West of Route 580 in the City of Hayward, Alameda County, CA	Construction	N/A	10/7/2009
4	5th Avenue Overhead Bridge Replacement (EA No. 1706U4)	On Route 880 in the City of Oakland, Alameda County, CA	Construction	N/A	10/7/2009
4	Walnut Creek East (Delta Region) Maintenance Facility	2616 North Main Street, Walnut Creek, CA	Maintenance	N/A	10/7/2009
4	Sycamore Landscape Maintenance Facility	815 Camino Ramon, Danville, CA	Maintenance	N/A	10/7/2009
4	Alcosta Landscape Maintenance Facility	21300 San Ramon Valley Boulevard, San Ramon, CA	Maintenance	N/A	10/7/2009
4	San Leandro (East Bay Region) Maintenance Facility	600 Lewelling Boulevard, San Leandro, CA	Maintenance	N/A	10/7/2009
4	Oakland/South Oakland (29th Avenue) Maintenance Facility	1112 29th Avenue, Oakland, CA	Maintenance	N/A	10/7/2009

Section 2.0 Permit Compliance Review

The EPA Audit Team conducted an evaluation of the Caltrans MS4 Program to assess compliance with the requirements of the Permit, which was issued July 15, 1999. The EPA Audit Team identified several deficiencies (hereafter, audit findings) regarding compliance with the Permit. The presentation of audit findings in this report does not constitute a formal compliance determination or notice of violation. The report identifies program deficiencies that represent areas of concern for successful program implementation. All referenced documentation used as supporting evidence is provided in Appendix B, and photo documentation is provided in Appendix C.

Section 2.1 Program Management

The Caltrans headquarters session was held to determine the role of headquarters in establishing a uniform statewide program, and to assess the Program Management and Program Evaluation and Reporting components of the program (Provisions G and K of the Permit).

2.1.1 Need for Improved Development and Implementation of a Uniform Statewide Storm Water Program. During the audit, Caltrans headquarters staff stated that their storm water program components (e.g., construction, post-construction, storm drain system maintenance, illicit connection/discharge program, and vegetation control) have been implemented uniformly throughout the state and that the program no longer differentiates between areas located inside or outside Phase I and II permit coverage. However, the Caltrans Office Chief of Design acknowledged that before the implementation of the 2008 Project Plan Design Guide (PPDG), the post-construction component of the storm water program was implemented differently outside Phase I and II areas. Specifically, treatment BMPs were not routinely and consistently deployed outside Phase I and II areas. Caltrans' inventory of treatment BMPs, for example, differentiates between areas located inside or outside Phase I and II permit coverage and lists only one treatment BMP in the primarily rural area of Caltrans District 1 (see Appendix B, Exhibit 1). In addition, as part of the 2007 update to the SWMP, Caltrans undertook a significant mapping effort that differentiates between areas located inside or outside Phase I and II permit coverage (see Appendix B, Exhibits 2 and 3). In summary, there are still some remnants of a storm water program that was not implemented uniformly throughout the state without regard to Phase I and II permit areas.

Caltrans headquarters staff described a number of tools it has used to attempt the development of a uniform statewide MS4 program. Caltrans headquarters staff acknowledged that it is beneficial to achieve some level of consistent operation across the districts. The tools used by headquarters to help establish consistent and reproducible results on a statewide basis include Storm Water Advisory Team (SWAT) meetings, a statewide SuperSWAT meeting, the headquarters Storm Water Management Team, technical memorandums/bulletins, and informal guidance changes. The Caltrans SWMP, dated May 2003, Section ES.2, states that "implementation of the Statewide SWMP is initiated by directives from Headquarters." Notwithstanding the efforts of headquarters,

the EPA Audit Team noted significant variation in program implementation methods throughout Districts 1–4. Examples of these variations are discussed in the following paragraphs.

Despite the existence of numerous storm water guidance documents and associated recordkeeping forms developed by headquarters, Districts 1–4 exhibited significant variation in the tracking of Maintenance Program activities and construction site locations, inspections, and documentation. For example, district Construction Storm Water Coordinators were not consistently adhering to the Caltrans *Construction Storm Water Coordinator Guidance Manual*, dated January 2003 for electronically tracking construction projects within each district (see Section 2.3.3 of this Audit Report). Although headquarters has developed a Storm Water Pollution/Drainage recordkeeping form, the EPA Audit Team questioned maintenance personnel in the field and did not find that Storm Water Pollution/Drainage reports or functionally equivalent forms had been actively used in identifying and tracking illicit connections/illicit discharges (see Section 2.4.2.1 of this Audit Report). Furthermore, the individual Caltrans districts were generally unaware of how public complaints of illicit connections/illicit discharges (IC/IDs) were to be collected and tracked, even though the procedure is specified in Appendix C of the *Caltrans Maintenance Staff Guide* (See Section 2.4.2.3 of this Audit Report). During the interview session at Caltrans headquarters, the Caltrans Chief Environmental Engineer explained that the districts should be following these guidance documents.

Although there were multiple examples of variation in district-level implementation methods that have contributed to program deficiencies, the EPA Audit Team also noted positive attributes that could potentially serve as models for improvement if adequately modified and implemented. For example, District 4 has been conducting pilot projects for post-construction BMPs that could expand the types of BMPs that are approved for statewide application. District 4 has also developed standard operating procedures (SOPs) for construction oversight and documentation that show that a consistent process has been established for its inspection program. In addition, District 1 has developed a Notice of Discharge Reporting Protocol pursuant to the reporting requirements of the Permit and in conjunction with Construction Program management.

The observed variations suggest that the districts are operating semi-independently in terms of SWMP implementation (see, for example, Section 2.4.3.2 of this Audit Report). The observed variations between districts are inconsistent with the SWMP goal of implementation of a uniform statewide program.

Section 2.2 Post-Construction Program Management

Provision F.3 of the Permit requires Caltrans to “include an analysis of the feasibility of structural controls in the BMP selection process. At a minimum, a consideration of structural controls for water quality improvement shall be included in the design of any new construction or major reconstruction or repair project.” The EPA Audit Team confirmed that district staff had consistently used the Storm Water Data Report, a standard statewide documentation format, to address consideration of structural controls.

2.2.1 Need for Improved Tracking of Post-Construction BMP Maintenance.

Conversations with district Maintenance Storm Water Coordinators suggested that Maintenance staff were not using an effective set of tracking tools for conducting post-construction BMP maintenance inspections. In some districts, Maintenance staff was not using either a formal tracking system or the BMP inventory developed by headquarters to perform maintenance of post-construction BMPs.

Without effective tracking and inspection procedures, Caltrans cannot ensure that adequate long-term maintenance is performed. Caltrans Maintenance personnel are responsible for maintaining post-construction BMPs. The lack of effective tracking and inspection procedures is a significant impediment to proper long-term maintenance and operation of post-construction BMPs.

Section 2.3 Construction Program Management

Provision H of the Permit requires Caltrans to implement a program to control all construction in the rights-of-way. Provision E of the Permit requires that the SWMP “reflect the principles that storm water management is to be a year-round proactive program to eliminate or control pollutants at their source or to reduce them from the discharge by either structural or nonstructural means when elimination at the source is not possible.” In this manner, the Permit emphasizes the use of year-round source control, and the EPA Audit Team took this into consideration in its evaluation of the Construction Management Program.

As part of the evaluation, the EPA Audit Team conducted 25 site visits at construction sites located in the Caltrans rights-of-way, directly related to the construction activity, and/or served by the Caltrans MS4. The purposes of the site visits were (1) to assess the adequacy, appropriateness, and maintenance of BMPs at construction sites to prevent and reduce storm water pollution, and (2) to gauge the overall effectiveness of Caltrans’ oversight of storm water compliance at its construction sites.

2.3.1 Failure to Require Adequate Structural and Nonstructural BMPs.

The Permit requires Caltrans to implement a program to control all construction in the rights-of-way and states the “program must include requirement of structural and nonstructural BMPs” as required by Provision H.1.b. Pursuant to these requirements, the SWMP, Section 1.4, states that the “Department [Caltrans] will implement the revised SWMP approved by the SWRCB. Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines....” which provide a description of each approved [structural and nonstructural] BMP included in the SWMP for statewide application. Based on an assessment of 25 construction sites, Caltrans failed to require its contractors to implement adequate structural and nonstructural BMPs. The construction site assessments were considered collectively in making this determination, which directly pertains to Caltrans’ oversight obligations under its MS4 permit.

The EPA Audit Team identified numerous on-site examples of inadequate BMPs that had not been implemented in accordance with the proven design, selection, installation, and

maintenance specifications included in Appendix D of the Caltrans SWMP, and did not meet the current performance standards of Best Available Technology Economically Achievable/Best Conventional Technology (BAT/BCT). The Thomes Creek Bridge Project is presented below as a prime example of this issue.

Caltrans District 2: Thomes Creek Bridge Project. The EPA Audit Team conducted a site visit at the Thomes Creek Bridge project located approximately 3 miles north of Corning, California, at the Interstate 5 Thomes Creek bridge crossing in Tehama County. The site visit coincided with a precipitation event on October 13, 2009, that produced heavy rains. Precipitation data obtained from the California Data Exchange Center (CDEC) Corning Airport Station, approximately 3 miles southeast of the Thomes Creek Bridge project, indicated that rain began falling at approximately 1 a.m. on October 13, 2009, and lasted through 5 p.m. October 13, 2009. The total accumulation during this 16-hour period was 2.21 inches of rainfall. The National Oceanic and Atmospheric Administration (NOAA) Atlas 2, Volume XI, isopluvial map indicates that 2.5 inches of rainfall would accumulate during a 2-year, 24-hour precipitation event, which is more than the actual 2.21 inches of rainfall that occurred on October 13, 2009. Based on these data, the storm occurring on October 13, 2009, was less than a 2 year, 24-hour event and is therefore considered a common precipitation event. The site conditions observed on October 13, 2009, are summarized below.

Prohibition A.1 of the Permit states that the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.” Adequate BMPs or perimeter controls had not been implemented for the areas of disturbance associated with the contractor staging and material storage areas located up-gradient of Thomes Creek. For example, a concrete washout was improperly implemented and was lined with plastic that had been torn and badly deteriorated (see Appendix D, Site Visit No. 1, Photographs 1 and 2). In addition, uncontained concrete waste was observed on the ground surface directly adjacent to the concrete washout (see Appendix D, Site Visit No. 1, Photograph 3). The Caltrans District 2 Resident Engineer for the project stated that the concrete washout area had been present for a long time and was not identified in the project’s Storm Water Pollution Prevention Plan (SWPPP). Moreover, a visible discharge of sediment and/or other pollutants was observed leading from the contractor staging and material storage areas to Thomes Creek (see Appendix D, Site Visit No. 1, Photographs 4 through 7).

Provision E.1 of the Permit states “Caltrans shall maintain and implement an effective SWMP.” Adequate BMPs had not been implemented for areas of disturbance located directly adjacent to the flowing Thomes Creek. Although erosion log BMPs had been implemented, the erosion logs had not been staked in accordance with Appendix D of the Caltrans SWMP, Section 4.5.1, and a resulting discharge of sediment was observed bypassing the BMPs and leading to Thomes Creek (see Appendix D, Site Visit No. 1, Photographs 8 and 9).

Further, Appendix D of the Caltrans SWMP, Section 4.5.14, Stockpile Management, states that “protection of stockpiles is a year-round requirement. All stockpiles shall be located away from concentrated flows of storm water, drainage courses, and inlets.” BMPs had not been implemented to prevent the discharge of sediment from unconsolidated soils and soil stockpiles located adjacent to the Thomes Creek bridge and west of Interstate 5 (see Appendix D, Site Visit No. 1, Photographs 10 and 11). Because the unconsolidated soils and soil stockpiles were located within the reach and bounds of Thomes Creek without BMPs, Caltrans had not implemented the BMPs specified in Appendix D of the Caltrans SWMP, Section 4.5.14. The EPA Audit Team observed a discharge of pollutants from the contractor staging and material storage areas to Thomes Creek.

Appendix D of the Caltrans SWMP, Section 4.5.10, Waste Management, states, “Temporary sanitary facilities shall be located away from drainage facilities and watercourses. When subjected to high winds or risk of high winds, as determined by the RE [Resident Engineer], temporary sanitary facilities shall be secured to prevent overturning.” Adequate BMPs for waste storage, spill prevention, and containment had not been implemented for a portable toilet located under the Thomes Creek bridge. The portable toilet was not properly secured and had blown over, resulting in visible chemical and sanitary waste staining on the ground surface (see Appendix D, Site Visit No. 1, Photographs 12 through 14). Because the portable toilet was located within the reach and bounds of Thomes Creek and was not properly secured, Caltrans had not implemented the BMPs specified in Appendix D of the Caltrans SWMP, Section 4.5.10. Because of the lack of adequate BMPs, there was a chemical and sanitary waste spill from the toilet and the potential to contribute pollutants to storm water.

An analysis of additional construction sites is provided in Appendix D, which includes a narrative summary of construction site observations and associated photo documentation. In some instances, a lack of BMPs or inadequate BMPs had resulted in BMP failure, off-site transport of pollutants, or the discharge of pollutants to a receiving water. The following Construction Program Site Visit Reports provide additional supporting evidence that directly pertains to this audit finding:

- District 2 South Avenue On-ramp (see Appendix D, Site Visit No. 2)
- District 2 Fountain Curve Rehabilitation Project (see Appendix D, Site Visit No. 3)
- District 2 Salyer Roadway Realignment (see Appendix D, Site Visit No. 4)
- District 3 Nicolaus Bypass Project (see Appendix D, Site Visit No. 5)
- District 3 Lincoln Bypass Project (see Appendix D, Site Visit No. 6)
- District 2 Top of Buckhorn Project (see Appendix D, Site Visit No. 7)
- District 2 Yankee Gulch Project (see Appendix D, Site Visit No. 8)
- District 1 Last Chance Grade Project (see Appendix D, Site Visit No. 9)
- District 4 Isabel Avenue/Route 580 Interchange Project (see Appendix D, Site Visit No. 10)
- District 4 Sunol Grade/Route 680 Roadway Rehabilitation Project (EA No. 253794) (see Appendix D, Site Visit No. 11)

- District 1 Smith River Safety Roadway Project (see Appendix D, Site Visit No. 12)
- District 2 Dana to Downtown Project (see Appendix D, Site Visit No. 13)
- District 3 Tudor Bypass Project (see Appendix D, Site Visit No. 14)
- District 4 Sunol Grade/Route 680 Roadway Rehabilitation Project (EA No. 4A5204) (see Appendix D, Site Visit No. 15)

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of-way that includes requirements for adequate structural and nonstructural BMPs. Provision E.1 of the Permit states “Caltrans shall maintain and implement an effective SWMP” including the proven design, selection, installation, and maintenance specifications included in Appendix D the SWMP. On limited occasions, the EPA Audit Team observed the application of BMPs that were adequately implemented in accordance with proven design, selection, installation, and maintenance specifications. For example, the District 1 Alton Interchange Project (EA No. 290304) used a tiered combination of multiple erosion and sediment controls and could serve as a model for improving the Caltrans Construction Program (see Appendix C, Photographs 1 and 2).

2.3.2 Failure to Conduct Adequate Site Inspections and Enforcement. The Permit requires Caltrans to implement a program to control all construction in the rights-of-way and states that the “program must include site inspections and enforcement” as required by Provision H.1.c. Pursuant to these requirements, Section 4.2.2 of the Caltrans SWMP states that the Resident Engineer (RE) is the Caltrans representative “charged with administering construction contracts and responsibility for ensuring that storm water controls are implemented on construction sites....The RE periodically inspects the construction site for proper installation and maintenance of BMPs and overall implementation of the approved WPCP [Water Pollution Control Plan] or SWPPP.”

Based on an assessment of 25 construction sites, Caltrans failed to conduct adequate site inspections and enforcement. The construction site assessments were considered collectively in making this determination. The EPA Audit Team identified multiple examples of inadequate BMPs attributed to a RE not fully enforcing the contract conditions to correct deficiencies identified during inspections. The Sunol Grade/Route 680 Roadway Rehabilitation Project is presented below as a prime example of this issue.

Caltrans District 4: Sunol Grade/Route 680 Roadway Rehabilitation Project (Caltrans EA No. 253794). The EPA Audit Team conducted a site visit at the Scott Creek staging yard located west of Route 680 at the Scott Road interchange near the Alameda-Santa Clara County boundary. The Scott Creek waterway is approximately 500 feet southeast of the staging yard.

Adequate BMPs had not been implemented for construction waste handling and disposal. Various construction wastes and chemicals were improperly disposed of and/or stored throughout the Scott Creek staging yard (see Appendix D, Site Visit No. 11, Photographs 1 through 9). Uncovered and uncontained construction waste included asphalt release

agent and petroleum products without secondary containment BMPs (see Appendix D, Site Visit No. 11, Photographs 6, 7, and 8).

In an oversight inspection conducted September 9, 2009, the Caltrans Construction Storm Water Coordinator's inspector also identified the asphalt release agent and petroleum products lacking secondary containment, and uncovered/uncontained construction waste, but these issues had not been corrected through adequate enforcement of the contract conditions as of October 7, 2009, the date of the EPA Audit Team's site visit (see Appendix B, Exhibits 6, 7, and 8).

An analysis of additional construction sites is provided in Appendix D, which includes a narrative summary of construction site observations and associated photo documentation. The following Construction Program Site Visit Reports provide additional supporting evidence that directly pertains to this audit finding.

- District 2 South Avenue On-ramp (see Appendix D, Site Visit No. 2)
- District 1 Last Chance Grade Project (see Appendix D, Site Visit No. 9)
- District 4 Sunol Grade/Route 680 Roadway Rehabilitation Project (EA No. 4A5204) (see Appendix D, Site Visit No. 15)

The failure to correct deficiencies identified by Construction Storm Water Coordinators indicates that Caltrans water quality staff do not have adequate control over construction projects. The Caltrans Districts 1 and 4 Construction Storm Water Coordinators acknowledged that poor construction site conditions are often a result of REs that are not supportive of storm water considerations. Caltrans District 1, for example, places oversight inspection priority on projects where the RE is known to be resistant to storm water considerations.

Provision G.5 of the Permit requires that "Caltrans shall have an inspection program to insure actions are implemented...in accordance with this NPDES Permit [SWRCB Order No. 99-06-DWQ] and the SWMP. The program shall include...documentation of field activities." District 1 oversight inspections by the Construction Storm Water Coordinator were not adequately documented. Additionally, Construction Storm Water Coordinator Guidance Manual, Section 3.5.5 states "the CSWC [Construction Storm Water Coordinator] is required to conduct an inspection at least once a month of every SWPPP project (≥ 5 acres of soil disturbance) and every other month of WPCP projects, using the contractor or consultant inspector checklists." The District 1 Construction Storm Water Coordinator explained that he does not use an inspection checklist to document inspections. Instead, inspection results and recommended corrective actions are typically transmitted to the RE verbally. This process is not consistent with the Permit or the Construction Storm Water Coordinator Guidance Manual.

2.3.3 Need for Improved Construction Site Tracking. To comply with Provision H of the Permit, including construction oversight inspections, Caltrans must implement an effective mechanism for construction site tracking.

The EPA Audit Team formally requested an “inventory of current active construction sites in the permit area of Districts 1–4.” Caltrans Districts 1–4 each provided lists of construction sites, titled “Statement of Ongoing Contracts (SOGC),” for projects within the respective districts. The lists, however, did not provide the actual status of the construction sites, and it was determined during the audit that the presence of a construction site on the SOGC list did not necessarily indicate that the site was active.

The Caltrans Construction Storm Water Coordinator Guidance Manual acknowledges the need for a statewide construction site tracking system. Section 3.1 of the Construction Storm Water Coordinator Guidance Manual states that the SOGC should be used as a “starting point” for tracking construction projects. Furthermore, the document lists the specific types of information that Construction Storm Water Coordinators should track electronically for each construction project within a district. If specified information were effectively tracked, it would provide Construction Storm Water Coordinators and headquarters staff with information to determine the status of construction sites and prioritize oversight inspections. However, this information had not been effectively tracked for construction sites in each district and an effective statewide construction tracking system had not been implemented.

The EPA Audit Team observed wide variation in construction site project tracking at the district level, and the Construction Storm Water Coordinators had difficulty identifying all active construction and project locations. For example, Districts 1 and 3 had not implemented a formal construction site tracking mechanism and exhibited a reliance on the institutional knowledge of their staff for identifying construction sites for oversight inspections. In addition, District 4 was not able to readily determine which construction sites were active and had to contact multiple REs to determine the status of several construction projects.

Section 2.4 Maintenance Program Management

Provision I of the Permit requires Caltrans to implement the Maintenance Program specified in the Caltrans SWMP. All Caltrans organizational divisions involved in highway maintenance and support activities are collectively referred to as “Maintenance” throughout the remainder of this Audit Report.

As part of the evaluation, the EPA Audit Team conducted approximately 30 site visits at maintenance facilities and activities located in the Caltrans owned rights-of-way and/or served by the Caltrans MS4. The purposes of the site visits were (1) to assess the adequacy, appropriateness, and maintenance of BMPs to prevent and reduce storm water pollution, and (2) to gauge the overall effectiveness of the Caltrans oversight activities for maintenance facilities and activities.

Section 2.4.1 Highway Maintenance Facilities

2.4.1.1 Failure to Develop Required Facility Pollution Prevention Plans for all Caltrans Organizational Divisions with Maintenance Facilities. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs [Facility Pollution Prevention

Plans] for all maintenance facilities.” The EPA Audit Team identified and observed two Caltrans Division of Equipment and headquarters Department of General Services vehicle maintenance facilities where FPPPs had not been developed as required. Furthermore, these facilities are not included in the inventory of district facilities listed in the respective Caltrans Storm Water Management Program District Work Plan, Fiscal Year 2009–2010, used for NPDES reporting. Because Caltrans uses this inventory for scheduling inspections, these facilities would not be included in the inspection program for storm water purposes, particularly the oversight inspections carried out by Caltrans headquarters and its consultant. The identified and observed facilities included the following:

- District 3 Equipment Shop No. 23110 at 981 North Beale Road in Marysville, CA 95901
- District 1 Equipment Shop No. 21110 at 1650 Albee Street in Eureka, CA 95501.

Additional Caltrans Division of Equipment and headquarters Department of General Services maintenance facilities were identified during the post-audit records review. These facilities are not included in the inventory of district facilities listed in the Caltrans Storm Water Management Program District Work Plan, Fiscal Year 2009–2010, used for NPDES reporting. The records did not indicate whether FPPPs have been developed and implemented as required, or whether the facilities have been included in the inspection program for storm water purposes. The facilities identified during the post-audit record review were the following:

- District 3 Sacramento Equipment Sale Yard at 2100 Evergreen Street in Sacramento, CA 95825
- District 3 Equipment Shop at 3400 R Street in Sacramento, CA.

2.4.1.2 Failure to Develop Required Facility Pollution Prevention Plans and Provide Appropriate Site-Specific BMPs for all Maintenance Facility Types. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site specific BMPs.” The EPA Audit Team observed multiple sweeper and roadway waste stockpile locations where FPPPs had not been prepared and BMPs were not implemented for adequate coverage or containment of pollutants. Sweeper waste contains various fine pollutant particles and non-visible pollutants. As evidenced by Appendix E, Site Visit No. 16, some roadway waste may also be classified as hazardous waste. The District 4 Washington Waste Storage Site is presented below as a prime example of the failure to provide FPPPs and appropriate site-specific BMPs.

Caltrans District 4: Washington Waste Storage Site. The EPA Audit Team conducted a site visit at the facility located near the Washington Boulevard exit along Highway 880 North in San Leandro, Alameda County, California. Caltrans owns and operates this site for the temporary storage of waste picked up by its vactor trucks, road sweepers, and road-cleaning crews before the debris is loaded into a truck and hauled to a landfill for final disposal (see Appendix E, Site Visit No. 17, Photograph 1). Solid and liquid wastes

from Caltrans' vactor trucks are deposited into an excavated area for dewatering prior to the debris's being hauled off-site for disposal (see [Appendix E, Site Visit No. 17, Photograph 2](#)). Vactor, sweeper, and roadway waste are potential pollutant sources. Although the Washington Waste Storage Site itself is permanent, an FPPP had not been developed for the site.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Coverage and containment BMPs had not been implemented for the sweeper and roadway waste stockpiles, and there was a potential for the discharge of pollutants to storm water runoff (see [Appendix E, Site Visit No. 17, Photographs 1, 3, and 4](#)). Due to the lack of coverage and containment BMPs, fugitive trash and other debris were not maintained as part of the original stockpile and had been strewn across the site (see [Appendix E, Site Visit No. 17, Photographs 4 and 5](#)). A Caltrans roadway maintenance supervisor from the San Leandro Maintenance Yard stated that the debris deposited at the waste storage site is usually stored for about 90 days before a contracted hauling company removes the material and disposes of it at a nearby landfill. A Caltrans staff member explained that BMPs had not yet been implemented at the site because the audit occurred before the October 15th start of the rainy season. He added that straw wattles would be placed around the waste stockpiles on the ground surface in accordance with the stockpile management techniques outlined in the *Caltrans Stormwater Quality Handbook – Maintenance Staff Guide* (Caltrans Maintenance Staff Guide), dated May 2003. The EPA Audit Team noted that no BMPs were stored at the facility for implementation in the event of precipitation prior to October 15th.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Caltrans Maintenance Staff Guide are not adequate to contain the collected waste. In recognition of this issue, Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states "dispose of waste to a landfill or approved site.... There is to be no dumping on site, especially during the rainy season or during unseasonal storm events." Although it is beyond the scope of this audit, it should be noted that many of the sweeper and roadway waste stockpile locations were likely not meeting solid waste handling and disposal regulations.

An analysis of additional maintenance sites is provided in Appendix E, which includes a narrative summary of Maintenance Program field observations and associated photo documentation. The following facilities are not included in the inventory of district facilities listed in the respective Caltrans Storm Water Management Program District Work Plan, Fiscal Year 2009-2010, used for NPDES reporting. Because Caltrans uses this inventory for scheduling inspections, these facilities would not be included in the inspection program for storm water purposes, particularly the oversight inspections carried out by Caltrans headquarters and its consultant. The following observed sites did not have FPPPs or appropriate site-specific BMPs:

- District 4 Livorna Waste Storage Site (see [Appendix E, Site Visit No. 18](#))
- District 4 Schaefer Ranch Waste Storage Site (see [Appendix E, Site Visit No. 19](#))

- District 4 Scott Creek Road - Sunol Grade/Route 680 Roadway Rehabilitation Project (see Appendix D, Site Visit No. 11)²
- District 1 Sweeper Waste Storage Location near the intersection of Little River Drive and Highway 101, approximately 10 miles north of Arcata, California.

The following sites had FPPPs and were included in the inventory of district facilities listed in the respective Caltrans Storm Water Management Program District Work Plan, Fiscal Year 2009-2010, but appropriate site-specific BMPs had not been implemented:

- District 1 Willow Creek Maintenance Facility (see Appendix E, Site Visit No. 16)
- District 3 Marysville Maintenance Station (see Appendix E, Site Visit No. 20).

Caltrans had not inventoried all sweeper and roadway waste stockpile locations or roadside vector waste decant sites. It was noted by Caltrans staff that there could be thousands of these sites statewide.

2.4.1.3 Failure to Implement Appropriate Site-Specific BMPs for Street Sweeper, Vehicle, and Equipment Washing. Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. In addition, Prohibition A.7 and B.1 of the Permit require Caltrans to prohibit non-storm-water discharges into its storm water conveyance system. The EPA Audit Team observed multiple examples of inappropriate washing of street sweepers, vehicles, and equipment despite the availability of designated wash racks that are equipped for proper disposal of wash water and associated pollutants. The District 1 Bracut Maintenance Facility is presented below as a prime example of this issue.

Caltrans District 1: Bracut Maintenance Facility. The EPA Audit Team conducted a site visit at the facility located at 6100 North Highway 101, Eureka, CA 95503. The Washington Gulch waterway is approximately 1,000 feet east of the facility. Although the facility is equipped with a designated and covered vehicle and equipment wash rack (see Appendix E, Site Visit No. 21, Photographs 1 and 2), an area in the northwest corner of the facility and directly adjacent to two storm drain inlets was used for road sweeper washing activities (see Appendix E, Site Visit No. 21, Photograph 3). The Highway Maintenance Supervisor at the facility explained that the area was actively used for road sweeper washing because the pressure-washing equipment in the dedicated wash rack did not provide enough pressure to effectively conduct the cleaning operation.

The road sweeper washing area was not equipped to properly capture, treat, reuse, or dispose of road sweeper wash water and associated pollutants. Collected road sweepings contain fine pollutant particles and non-visible pollutants. Although BMPs had been installed, any wash water and associated pollutants passing through the BMPs and subsequently entering the MS4 would be considered an illicit discharge. The BMPs

² Note that this site is listed as “Closed – used by Construction” in the *District 4 Work Plan, Fiscal Year 2009-2010*, but sweeper and roadway waste storage were present.

implemented for the road sweeper washing area are described in the following paragraphs.

Filter fabric had been installed in one of the adjacent storm drain inlets, and absorbent booms had been placed around the other inlet (see Appendix E, Site Visit No. 21, Photographs 4 and 5). However, the BMPs implemented for inlet protection were not properly maintained and significant pollutant accumulation was observed around the inlets. Furthermore, sand bags containing debris had been used for weights on top of the absorbent booms placed around one of the storm drain inlets, and several of the bags were no longer securely closed (see Appendix E, Site Visit No. 21, Photograph 6).

Although storm drain inlets at the facility were equipped with filters, evidence of pollutant accumulation was observed in one of the storm drain inlets near the road sweeper washing area (see Appendix E, Site Visit No. 21, Photograph 7), which indicated that an unknown quantity of sweeper wash water had been discharged to the MS4. The discharge location of the storm drain inlets associated with the road sweeper washing area was unclear. Prohibition A.7 of the Permit states, "Wastes or wastewater from road sweeping vehicles or from other maintenance or construction activities shall not be discharged to any surface waters or to any storm drain leading to surface water bodies."

In addition, two containers of a cleaning agent were improperly stored adjacent to a concrete drainage swale and a leaking hose along the eastern side of the facility (see Appendix E, Site Visit No. 21, Photograph 11). The containers were not stored within secondary containment, and as a result there was a potential for the contribution of wash water and pollutants to storm water runoff, and subsequently to a downgradient storm drain inlet (see Appendix E, Site Visit No. 21, Photograph 12).

In summary, the observed washing areas in the northwest corner and eastern side of the facility were not equipped to properly capture, treat, reuse, or dispose of wash water and associated pollutants, and the practice of washing vehicles and equipment could therefore lead to pollutant contributions to storm water runoff.

An analysis of additional maintenance sites is provided in Appendix E, which includes a narrative summary of Maintenance Program field observations and associated photo documentation. The following Maintenance Program Site Visit Reports provide additional supporting evidence that directly pertains to this audit finding.

- District 1 Willow Creek Maintenance Facility (see Appendix E, Site Visit No. 16)
- District 1 Garberville Highway Maintenance Facility (see Appendix E, Site Visit No. 22).

2.4.1.4 Failure to Implement Appropriate Site-Specific BMPs for Various Other Maintenance Activities and/or Facilities. Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. The EPA Audit Team observed multiple examples of inadequate pollution prevention and housekeeping practices at maintenance facilities. The District 1 Berry Summit Sand

Storage Facility is presented below as a prime example of inappropriate BMP selection for the particular application and/or pollutant source.

Caltrans District 1: Berry Summit Sand Storage Facility. The EPA Audit Team conducted a site visit at the facility at post mile 34.1, Highway 299, Willow Creek, California. The facility is approximately 250 feet west of Willow Creek. A stockpile of roadway abrasives was stored on the impervious ground surface upgradient of a storm drain inlet in the northern corner of the facility (see Appendix E, Site Visit No. 23, Photographs 1, 2 and 3). BMPs had not been implemented for covering or containing the stockpile. As explained by a Caltrans staff member, the storm drain inlet is equipped with an enlarged catch basin area to allow sand particles to settle prior to discharge; however, based on conversations with Caltrans staff, it did not appear that there was an established frequency for regular cleaning and maintenance of the inlet. Absorbent boom BMPs had been placed around a portion of the storm drain inlet (see Appendix E, Site Visit No. 23, Photograph 2); however, the BMPs were not fully protective of the inlet, and absorbent boom BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management and there was a potential for the discharge of pollutants off-site.

In addition, a 10- to 20-foot section of the berm along the northern perimeter of the site was not intact, and accumulated roadway abrasives were observed adjacent to the failed berm (see Appendix E, Site Visit No. 23, Photograph 4). Roadway abrasives were also observed on the impervious ground surface in various other areas at the facility and beyond the perimeter fence line (see Appendix E, Site Visit No. 23, Photographs 5, 6 and 7). As a result, there was a discharge of pollutants beyond the bermed perimeter, along with the potential for subsequent off-site discharge.

An analysis of additional maintenance sites is provided in Appendix E, which includes a narrative summary of Maintenance Program field observations and associated photo documentation. The following Maintenance Program Site Visit Reports provide additional supporting evidence of inappropriate BMP selection for the particular application and/or pollutant source:

- District 1 Garberville Highway Maintenance Facility (see Appendix E, Site Visit No. 22)
- District 1 Bracut Maintenance Facility (see Appendix E, Site Visit No. 21)
- District 1 Willow Creek Maintenance Facility (see Appendix E, Site Visit No. 16).

Inadequate pollution prevention and housekeeping practices were also observed at the following fixed maintenance facilities.

- District 1 Crescent City Maintenance Facility (see Appendix E, Site Visit No. 24)
- District 2 Obrien Rest Area (see Appendix E, Site Visit No. 25)

- District 2 Lake Boulevard Temporary Storage Site (see Appendix E, Site Visit No. 26)
- District 3 Marysville Maintenance Station (see Appendix E, Site Visit No. 20)
- District 3 Colusa Temporary Storage Site (see Appendix E, Site Visit No. 27).

Section 2.4.2 Highway Surveillance Activities and IC/ID Detection Program

Provision I.2.b of the Permit requires Caltrans to implement many requirements, including the Illicit Connection/Illicit Discharge (IC/ID) Detection Element described in the SWMP.

2.4.2.1 Need to Adequately Implement a Procedure to Track All IC/IDs through Resolution. Nonstorm Water Discharge Prohibition B.1 of the Permit defines IC/IDs and requires Caltrans to “effectively prohibit nonstorm water discharges into its storm water conveyance system” unless such discharges meet the exemptions specified in the Permit. Finding 4 of the Permit further defines conveyance system in broad terms to include roads with drainage systems, catch basins, curbs, gutters, ditches, manmade channels, or storm drains. Prohibition I.2.b(4) of the Permit requires Caltrans to adequately implement a procedure to track all reports of IC/IDs and the action taken on them. Caltrans was not adequately tracking IC/IDs or collecting data based on the definition in the Permit.

The EPA Audit Team formally requested “records showing incidents of illicit discharges/connections and resolution (2008 Calendar Year).” Caltrans Districts 1-4 provided records for Fiscal Year 2007–2008. However, the records indicate that Caltrans is not reporting all incidents where field and Maintenance personnel are involved. The Caltrans Districts 2, 3, and 4 records indicate between four and five IC/ID incidents in Fiscal Year 2007–2008, and the types of incidents are limited in scope to large-scale encroachments of the Caltrans right-of-way. Moreover, the District 1 records claim that there were no IC/ID incidents in Fiscal Year 2007–2008 (see Appendix B, Exhibit 12). In contrast to this claim, there are state highways in District 1 that traverse urbanized areas, and some, such as Highway 101 in Eureka, California, are two-lane highways with slower travel speeds. Throughout the audit, the EPA Audit Team viewed incidents of suspect materials along the highway storm water conveyance system (for example, see Appendix C, Photographs 3 and 4). Furthermore, District 1 Maintenance personnel explained that it is not uncommon to address/remove illegal dumping materials (e.g., petroleum products, methamphetamine production waste) from the highway system (see Appendix E, Site Visit No. 16). Based on this evidence, IC/IDs and illegal dumping to the Caltrans storm water conveyance system can and do occur but are not being recorded in the District’s records.

The EPA Audit Team formally requested “a procedure to track all reports of IC/IDs and the action taken on them [as required by Provision I.2.b(4) of the Permit]” from Caltrans Districts 1, 2, and 4. The individual Caltrans districts did not produce these records and were generally unaware that procedures existed. Instead, the Caltrans headquarters Chief of Storm Water Implementation researched the issue and provided procedures contained in the Caltrans Maintenance Staff Guide during the final week of the EPA Audit.

Appendix C of the Caltrans Maintenance Staff Guide, Section C.22.3, states that “maintenance personnel, as part of their routine inspections and maintenance work, shall report all observed suspected illicit connections to the District Maintenance Storm Water Coordinator, who will forward these observations to the NPDES Storm Water Coordinator. A Storm Water Pollution/Drainage report has been developed for use in this activity” (see Appendix B, Exhibit 13). Despite the development of this recordkeeping form, the EPA Audit Team questioned Maintenance personnel in the field and did not find that Storm Water Pollution/Drainage reports or functionally equivalent forms had been actively used. The records provided by Caltrans explain that Maintenance staff might not be formally documenting all IC/ID incidents because it is commonplace to simply place a radio call to supervisory staff (see Appendix B, Exhibit 14). Discussions with the District 1 Assistant Maintenance Storm Water Coordinator reaffirmed that radio calls are a common means of notifying supervisory staff of IC/ID incidents.

Because Appendix C of the Caltrans Maintenance Staff Guide, Section C.22.3, instructs Maintenance personnel to forward all observations of IC/ID incidents to the district NPDES Storm Water Coordinators, this position is named as a centralized recordkeeping point in the procedures. However, the district NPDES Storm Water Coordinators were generally unaware that the procedures existed. For example, the District 4 NPDES Storm Water Coordinator and Office Chief explained that they did not have procedures to conduct IC/ID investigations, and Districts 2, 3, and 4 could not produce the requested procedure. Collecting data on all IC/IDs is necessary to develop a comprehensive understanding of the types of IC/IDs to address/target in the highway system MS4. To this end, there might be an opportunity to leverage and integrate illegal dumping information obtained through Caltrans’ existing Adopt-a-Highway program.

2.4.2.2 Failure to Develop and Implement Adequate Procedures to Conduct Investigations of IC/IDs. As required by Provision I.2.b of the Permit, Caltrans must develop procedures to conduct investigations of every IC/ID to identify the source. The Permit states that “these procedures may include further field screening (observations and field analysis), collection and laboratory analysis of samples (upstream and downstream), smoke or dye tests, video taping with a remote control camera, or other appropriate means.”

Caltrans has not developed procedures for Maintenance personnel that describe how to recognize IC/IDs, conduct investigations of IC/IDs, or identify the IC/ID source. For example, the procedure in Appendix C of the Caltrans Maintenance Staff Guide, Sections C.22.3 and C.22.4, simply “directs maintenance staff to detect and report illicit connections and illegal discharges into Caltrans storm water drainage systems.” The procedure provides brief definitions for *illicit connection* and *illegal discharge* but does not provide specific examples or other tools for identifying and investigating such occurrences. For example, the procedure does not provide a description of visual or odor indicators, or protocols for documentation or sampling of an illicit discharge. Furthermore, the procedure does not provide tools or protocols for tracking an IC/ID upstream or identifying the source, and it does not denote which Caltrans staff are responsible for conducting source identification.

In contrast to the procedure described above, Caltrans has developed related guidance intended for construction contractors that provides clear direction on how to identify IC/IDs using field observations and related reporting (see [Appendix B, Exhibit 15](#)). This template could potentially be modified to serve as a model for the development of adequate IC/ID procedures for Caltrans Maintenance staff.

As explained by Caltrans staff, Maintenance personnel are typically the first responders to potential IC/ID incidents. Maintenance personnel interviewed during the audit explained that they generally perform the work related to IC/IDs but do not always document the occurrence of the incident or the response. Headquarters staff explained that IC/IDs that occur in an area that is not explicitly covered under a Caltrans regulatory mechanism (e.g., contract, encroachment permit) become the responsibility of Maintenance to address, document, and report.

Records of storm drain inlet cleaning activities provided by Maintenance staff in Districts 1, 2 and 4 (see [Appendix B, Exhibits 16, 17, and 18](#)) do not include a specific component relating to IC/IDs and indicate that IC/ID identification is not a component of storm drain inlet inspections. For example, the records do not indicate whether flow or ponding was observed and, if there was flow, whether there was a visible sheen or foam, turbidity, sediment accumulation, plumes from the outfall, floatables (e.g., sewage, suds), or odors. Rather, the records include only location and maintenance information.

Furthermore, the Caltrans storm drain system maps have proved to be of limited utility in tracking IC/IDs back to the source. For example, District 4 presented the EPA Audit Team with a storm drain system inventory of areas within Phase I MS4s in District 4. This inventory appeared to be the most comprehensive storm drain system map developed in Districts 1–4. The inventory exists only in paper format, and it includes drainage inlets, outfall locations, and the tributary area to inlets within the Caltrans right-of-way. It should be noted that the inventory does not include contributing inlets, connections, and drainage areas from areas outside the Caltrans right-of-way. Furthermore, Caltrans staff expressed a lack of confidence in the data and explained that the mapping would have to be redone to ensure data consistency. This example highlights the inadequacy of using the existing storm drain system maps as an effective tool for tracking IC/IDs back to the source.

One resource that Caltrans may want to consider is the Center for Watershed Protection's manual, *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* (EPA Publication No. 833-B-04-005). The manual was developed specifically to assist MS4s in developing and building effective programs to address illicit discharges and improper disposal. It explains the types of testing used to detect illicit discharges, offers information on estimating program costs in terms of capital and personnel expenses, and includes timelines that estimate how long program implementation will take. The Center has also developed related tools, including a procedural checklist and flowchart pertaining to outfall inspections. This document could also be used as a model for Caltrans' IC/ID program, provided it was

modified appropriately to address the concerns of the highway system MS4. The manual and tools can be downloaded at

http://www.cwp.org/Resource_Library/Controlling_Runoff_and_Discharges/idde.htm.

2.4.2.3 Need to Adequately Implement Permit Required Procedures for Receiving and Responding to Public Complaints of IC/IDs. Provision I.2.b(1) of the Permit requires Caltrans to “develop procedures for receiving and investigating public complaints including establishing telephone numbers which the public can use to report IC/IDs and shall post these numbers in places where illegal dumping is found to be a problem.”

The EPA Audit Team formally requested “procedures for receiving and investigating public and employee complaints of IC/IDs” from Caltrans Districts 1 and 2 (see Appendix B, item 16 in Exhibit 19). Caltrans Districts 1 and 2 did not produce these records, and all the individual Caltrans districts were generally unaware of how public complaints were to be collected and tracked. In response to the records request, the Caltrans HQ Chief of Storm Water Implementation researched the issue and provided procedures contained in the Caltrans Maintenance Staff Guide during the final week of the EPA audit. Appendix C of the Caltrans Maintenance Staff Guide, Section C.22.3, states that “all public-initiated calls should be directed to the District’s Public Affairs Officer. Calls regarding illicit connections should be logged and routed to the NPDES Storm Water Coordinator,” effectively naming the district NPDES Storm Water Coordinators as a centralized recordkeeping point in the procedures. Again the individual Caltrans districts were generally unaware of how public complaints were to be collected and tracked. For example, the District 1 NPDES Storm Water Coordinator explained that he had never heard of a public-initiated call being logged or reported. This indicates that the procedure contained in the Caltrans Maintenance Staff Guide has not been implemented and/or that the public reporting mechanism has not been adequately publicized.

When questioned on the topic of public reporting of IC/IDs, the individual Caltrans districts described multiple different telephone numbers (e.g., 9-1-1, California Relay Service/Road Conditions, and IC/ID hotlines maintained by local jurisdictions). The EPA Audit Team tested the California Relay Service/Road Conditions hotline established by Caltrans but did not find that it could be used to report IC/IDs. Therefore, Caltrans has not established dedicated or centralized telephone numbers for public reporting of IC/IDs.

In the Caltrans Maintenance Staff Guide, district Public Affairs Officers are named as a central point of contact for public-initiated calls regarding IC/IDs. However, formal training or guidance has not been developed to ensure calls are routed to the district Public Affairs Officers. Due to the lack of a structured reporting mechanism and a centralized reporting number, Caltrans was not capturing and reporting all IC/ID events that could impact storm water. Without a more thorough data collection effort, Caltrans is not adequately recording and investigating public complaints of IC/IDs and their impact on the highway system MS4.

2.4.2.4 Need to Leverage the Legal Authority of Traditional MS4s. Provision G.2.a of the Permit requires Caltrans to establish and maintain adequate legal authority to control discharges to and from Caltrans properties, facilities, and activities. Caltrans does not have adequate internal legal authority/enforcement capabilities to prohibit and eliminate illicit discharges to its MS4. This is particularly the case for those IC/ID incidents that are not brought under a Caltrans regulatory mechanism (e.g., a contract or encroachment permit). The Caltrans Chief Environmental Engineer and other headquarters staff explained that Caltrans has no enforcement authority and therefore relies on the California Highway Patrol for enforcement at an executive level. The Caltrans Chief Environmental Engineer further explained that Caltrans does not routinely use the California Highway Patrol for enforcement and would do so only under conditions that are hazardous or pose a threat to public safety.

The EPA Audit Team formally requested “regulatory mechanism(s) prohibiting illicit non-storm water discharges to the MS4” from Caltrans Districts 1 through 4. In response, Caltrans provided a written explanation and excerpt from the California Streets and Highways Code (see Appendix B, Exhibit 20). The EPA Audit Team reviewed the California Streets and Highways Code and determined that it is limited in application. For example, Section 721(c) of that code provides Caltrans only with the authority to remove an encroachment of a state highway that consists of *refuse* (e.g., litter and other illegal dumping). Sections 725–727 of the California Streets and Highways Code generally provides Caltrans with only the authority to prevent or remove IC/IDs to the state highway system that *result in damage to the highway or impede proper drainage*.

The EPA Audit Team also formally requested an “example/case file of an illicit discharge incident where enforcement was used (ideally full extent of enforcement authority for each District)” (see Appendix B, item 21 in Exhibit 19). Caltrans Districts 3 and 4 provided examples that displayed some level of response and coordination with local jurisdictions that are traditional MS4s. However, District 1 did not produce records that demonstrate the exercise of internal legal authority/enforcement capabilities (see Appendix B, Exhibit 21), and Caltrans District 2 provided a case example that did not demonstrate resolution of the incident (see Appendix B, Exhibit 22). Furthermore, District 1 indicated that enforcement had never been used. This evidence indicates that Caltrans is not exhausting its internal legal authority/enforcement capabilities or effectively resolving IC/ID incidents that affect its MS4.

Provision G.1.b of the Permit requires Caltrans to develop and submit a Municipal Coordination Plan. However, the Caltrans headquarters Chief of Storm Water Implementation explained that the plan had never been developed or submitted to the SWRCB as required by Provision G.1.b of the Permit.

Section 2.4.3 Highway Maintenance Activities - Storm Water Drainage System Facilities Maintenance and Slope Stabilization

Provision I.1 of the Permit requires Caltrans to implement programs and systems for a variety of Highway Maintenance Activities described in the SWMP.

2.4.3.1 Failure to Identify and Conduct Cleaning of Storm Drain Inlets that Pose a Significant Threat to Water Quality. Provision I.1.c(1) of the Permit requires Caltrans to identify inlets that pose a significant threat to water quality and conduct removal of waste annually prior to the winter season.

Based on a review of the program, Caltrans has not identified and inventoried inlets that pose a significant threat to water quality on a statewide basis; and Caltrans cannot demonstrate removal of waste from those inlets on an annual basis prior to the winter season. The EPA Audit Team requested a “statewide inventory of all drainage inlets that pose a significant threat to water quality (based on accumulation or otherwise) and records that demonstrate removal of all waste from those inlets on an annual basis prior to the winter season FY07-08” (see Appendix B, item 13 in Exhibit 19). Caltrans was not able to produce the requested documentation during the audit. In response to the document request in District 1, Caltrans provided a statement that indicates that a statewide inventory of inlets that pose a significant threat to water quality does not exist. This response is included as Exhibit 23 in Appendix B.

Section 5.3.2.1 of the Caltrans SWMP states that “currently, the storm drains are maintained only to ensure hydraulic capacity.... [Caltrans] is working cooperatively with the SWRCB to develop and implement an appropriate measure to determine when systems are to be cleaned based on pollutant reduction.” It should be noted that this statement was included in the SWMP dated May 2003. Caltrans did not provide any information on what progress has been made within the past six years on implementing a program to clean the storm drain system based on pollutant reduction during the audit. As described in Section 5.3.2.2 of the Caltrans SWMP, Caltrans has implemented an “Enhanced Storm Drain Inlet Inspection and Cleaning Program,” in accordance with a court order, in several metropolitan areas along the southern coast of the state. The Enhanced Storm Drain Inlet Inspection and Cleaning Program includes annual inspections and cleaning (if needed) of “right shoulder storm drain inlets and other inlets that do not require lane closures” in the metropolitan portions of Los Angeles, San Diego, and Orange and Ventura counties.

Based on discussions with headquarters staff and Maintenance staff in Districts 1–4, Caltrans does not use consistent maintenance criteria for identifying whether storm drain inlets must be cleaned. For example, headquarters staff stated that storm drains with more than 12 inches of accumulated sediment should be cleaned; however, this maintenance criterion was not cited by district Maintenance staff when questioned on when an inspected storm drain should be cleaned. Further review of the SWMP revealed that the 12-inch maintenance criterion is applicable in only the areas included in the Enhanced Storm Drain Inlet Inspection and Cleaning Program.

There appeared to be a wide variation in maintenance approaches (i.e., timing, maintenance criteria, documentation) for storm drain system cleaning among Maintenance supervisors in Districts 1–4. Without a structured preventive maintenance program for water quality, Maintenance personnel rely primarily on institutional

knowledge of flooding hot spots and conduct storm drain inlet cleaning based on flood control rather than pollution prevention.

It should be noted that Caltrans district and headquarters staff explained that most of the storm drainage system is designed to be self-cleaning due to roadway safety issues. For example, many drop inlets within the system do not have sump or catchment space to collect debris. The self-cleaning design of the storm drainage system presents the challenge that accumulation rates are more difficult to ascertain to determine the relative threat to water quality and associated prioritization. Caltrans headquarters staff explained that Caltrans is evaluating a transition to the prioritization of storm drain inlet cleaning based on applicable Total Maximum Daily Loads (TMDLs) and known hot spot areas for pollutant accumulation. The EPA Audit Team encourages this approach as a component of a program to reduce the pollutant load discharged from the storm drain system.

2.4.3.2 Need to Adequately Identify, Prioritize, and Schedule the Stabilization of Roadway Erosional Areas. Provision I.1.a (3) of the Permit requires Caltrans to “identify road segments with slopes that are prone to erosion and discharge of sediment and stabilize these slopes to the extent possible.” Provisions I.1.a (1) and I.1.a (2) of the Permit further require that Caltrans identify priority and watershed pollutant reduction opportunities and establish schedules for implementing appropriate controls.

As evidenced below, Caltrans headquarters was not conducting adequate oversight of slope inspections and stabilization to ensure compliance with the Permit. The EPA Audit Team formally requested a “statewide inventory of road segments that are prone to erosion” from Caltrans Districts 1 and 2. In response to the records request, the Caltrans headquarters Chief of Storm Water Implementation researched the issue and explained that an overall inventory of roadway erosional areas and a prioritized or established schedule to stabilize roadway erosional areas on a statewide basis do not exist. It was further explained that until recently, the individual Caltrans districts maintained the slope inspection documentation.

The EPA Audit Team observed that a uniform data management system was not used for tracking slope inspection information (see [Appendix B, Exhibit 24](#)). In District 1, for example, the Maintenance Storm Water Coordinator explained that Maintenance uses accounting and data management software referred to as the Integrated Maintenance Management System (IMMS). The District 1 Maintenance Storm Water Coordinator further explained that Maintenance personnel in District 1 are primarily relying on institutional knowledge of slope failure/erosion hot spots and refer to these areas by colloquial names (e.g., Zimmer Slide). In contrast, District 2 was using a Microsoft Office Access database to track slope information.

Furthermore, it is unclear whether Caltrans headquarters currently maintains an oversight role in roadway slope erosion control. Section 5.3.4 of the Caltrans SWMP states that “the program to periodically inspect roadside vegetated slopes and determine the need for remedial measures is being implemented by the Maintenance Inspection and Slope Stabilization Team (MISST),” made up of approximately 40 members representing all

12 districts and headquarters. However, the District 1 Assistant Maintenance Storm Water Coordinator stated that the MISST had essentially dissolved, and district Maintenance Storm Water Coordinators no longer refer potential slope stabilization projects to it. In addition, the MISST is not mentioned in an October 2009 document that describes how Maintenance complies with the slope stabilization provisions of the Permit (see Appendix B, Exhibit 25). Caltrans District 1 and headquarters staff explained that instead of using the MISST, the districts submit proposals for complex slope stabilization projects that must then compete for limited funds. It was further explained that complex slope stabilization projects are not collectively prioritized for funding. In addition, Caltrans headquarters does not require the districts to submit annual reporting data in a format that can be verified by headquarters to ensure that all roadsides are inspected within the 5-year Permit term and that appropriate stabilization/resolution is completed in a timely manner.

It should be noted that based on a spot-check of records provided by District 2, the District had established a 5-year schedule for inspecting segments/lengths of state highway through Fiscal Year 2005/2006. District 2 also maintained a detailed database that includes fields for post mile location; size of gulley, rill, and sheet erosion; eroded volume estimates; grade of slopes; description of erosion; latitude/longitude data; and corresponding photographs. It was not determined whether Districts 1, 3, and 4 maintain similar information, or whether this information is being actively used.

Appendix A

Audit Schedule

Agenda for MS4 Audit of Caltrans (October 5–7, 13–14, and 21–22, 2009)

Caltrans Headquarters		
Day	Time	Program Area/ Agenda Item
Monday October 5, 2009	8:00 am– 8:30 am	Kickoff Meeting
	8:30 am– 12:00 pm	Program Management
	12:00 pm– 1:00 pm	Lunch Break
	1:00 pm– 2:00 pm	Maintenance Program
	2:00 pm– 4:00 pm	Monitoring, Reporting, and Research Program
Districts 3 and 4³		
Day	Time	Program Area/ Agenda Item
Tuesday October 6, 2009	8:00 am– 8:30 am	Kickoff Meeting & Program Management Overview
	8:30 am– 10:30 am	Construction Program (Office)
	10:30 am– 12:00 pm	Post-Construction Program (Office)
	12:00 pm– 1:00 pm	Lunch Break
	1:00 pm– 4:30 pm	Maintenance Program (Office)
		Recap and Logistics Planning for Wednesday

³ This schedule represents the typical discussion and field schedule for each Caltrans district included in the audit. District office and field activities were subject to change.

Districts 3 and 4			
Day	Time	Team 1 Program Area	Team 2 Program Area
Wednesday October 7, 2009	8:00 am— 10:30 am	Maintenance Program (Field)	Construction and Post- Construction Programs (Field)
	10:30 am— 12:00 am		
	12:00 pm— 1:00 pm	Lunch Break	
	1:00 pm— 5:00 pm	Maintenance Program (Field)	Construction and Post- Construction Programs (Field)

Appendix B
Exhibit Log

9/28/09
SC

DIST.	LOCATION	DESCRIPTION	NO. OF UNITS	COMMENT	Phase 1 Boundary	Phase 2 Boundary	Within 300ft of Phase 2 boundaries
1	01 Men 001 KP049.900	Biofiltration Strip	1	CA 45840 Future construction Source: FY 06 (a 7 BMPs, gp.xls) (G.Puruschka, 5/26/2006)			
2	02 BUT 070 E 028.900	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 BUT 070 E 042.100 PULGA MAINTENANCE	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 LAS 044 E 014.700 BOGARD SRRA	DETENTION BASINS (EXT/OTH)	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 LAS 395 N 048.500 HONEY LAKE SRRA	DETENTION BASINS (EXT/OTH)	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 LAS 139 PM 019.510	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 LAS 139 PM 019.520 S	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 LAS 139 PM 019.530 S	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 MOD 299 PM 013.500 W	DETENTION BASINS (EXT/OTH)	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 MOD 139 S 026.500	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 MOD 299 E 020.200	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 MOD 395 S 023.00 ALTURAS MAINTENANCE	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 MOD 299 E 008.300	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 069 PM 000.930 N	DETENTION BASINS (EXT/OTH)	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 009.000 E	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 026.900 E	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 036 PM 006.500 CHESTER	INFILTRATION DEVICE - BASIN	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.300 E	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.900 E	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 007.500 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 043.900 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.400 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.550 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.800 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 070 PM 044.900 W	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-
2	02 PLU 069 PM 003.100 N	TRACTION SAND TRAPS	1	Not located with a Phase I and II MS4 area; see Caltrans MS4 Boundary Maps.	Out	Out	-

Exhibit 1. Caltrans' inventory of treatment BMPs differentiates between areas located inside or outside of Phase I and II permit coverage, and only lists one treatment BMP in the primarily rural area of Caltrans District 1.

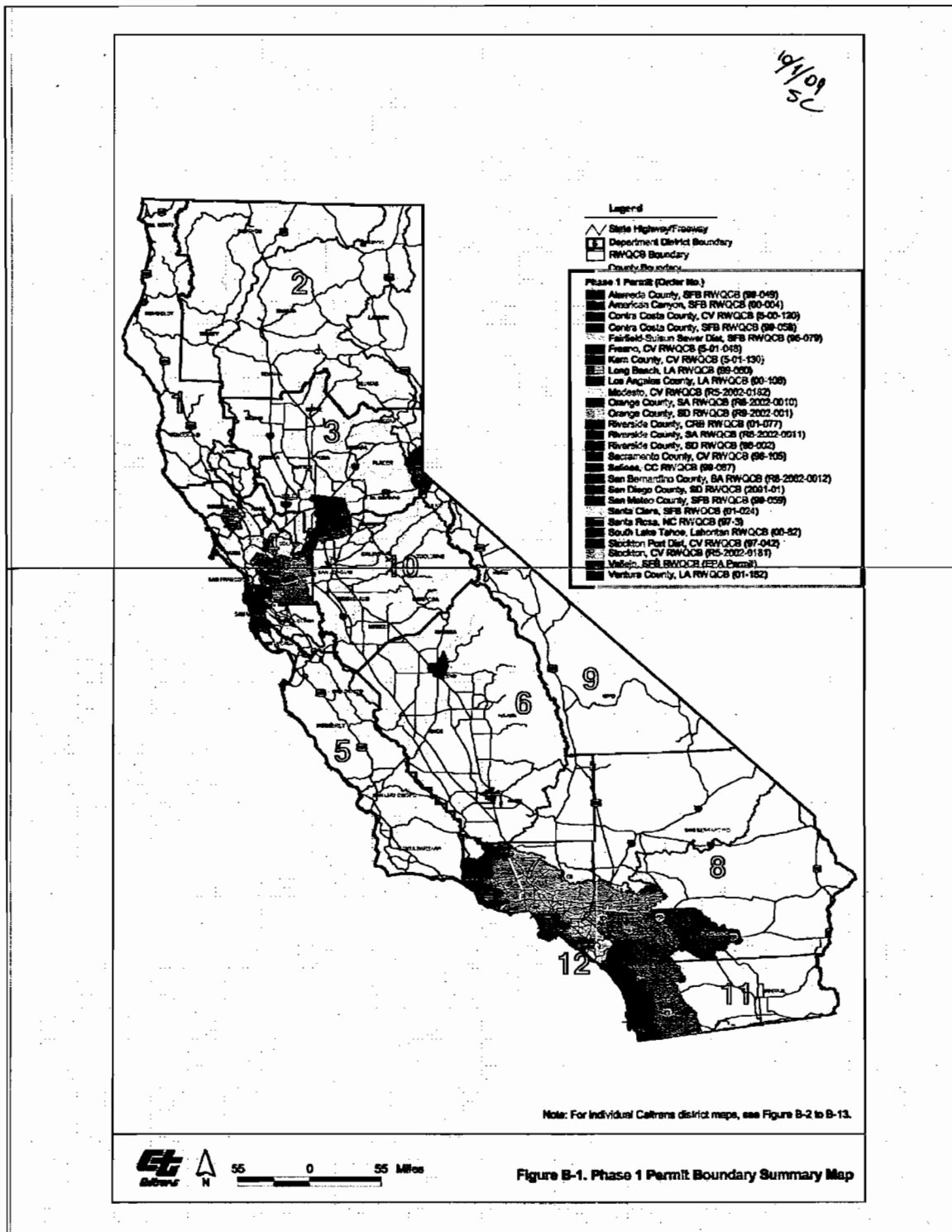


Exhibit 2. As part of the 2007 update to the SWMP, Caltrans undertook a significant mapping effort that differentiates between areas located inside or outside of Phase I and II permit coverage.

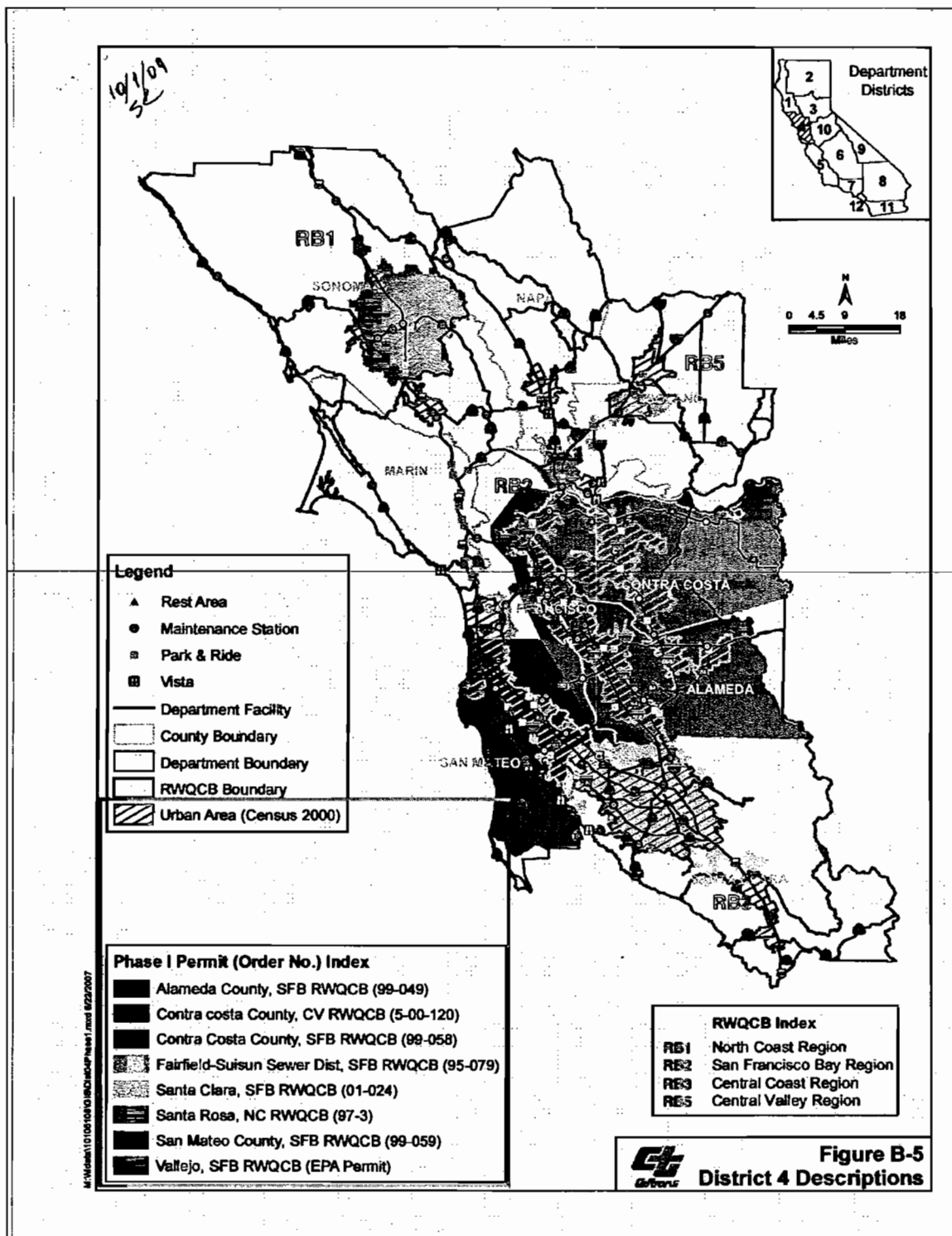


Exhibit 3. Caltrans District 4 map showing Phase I and II permit areas

JEM
10/13/09

Construction Project Stormwater Review Report

<p style="text-align: center;"><u>PROJECT RATING</u></p> <p style="font-size: 48pt; text-align: center;">1A</p>	<p>Non-Storm Water Controls - 1 <small>0 Y(s) assigned for 3 BMPs reviewed.</small></p> <p>Temporary Sediment Control - NA <small>No BMPs reviewed.</small></p> <p>Temporary Soil Stabilization - 1 <small>0 Y(s) assigned for 2 BMPs reviewed.</small></p> <p>Tracking Control - 1 <small>0 Y(s) assigned for 1 BMPs reviewed.</small></p> <p>Waste Management and Pollution Control - 1 <small>0 Y(s) assigned for 4 BMPs reviewed.</small></p> <p>Wind Erosion Control - 1 <small>0 Y(s) assigned for 1 BMPs reviewed.</small></p>
--	---

Date of Review: 10/6/2009
Contract #: 02 - 370704
County, Route, and PM: Tehama, 005, 3.5/10
SWPPP or WPCP: SWPPP
RE Name: Jim Rogers
Contractor Name: Knif River Construction
Review Type: New
Project Reviewer Name: Brian Adams

Project Description: South Ave Interchange Reconstruction

Project Comments: Rainy Season Dates are October 15th thru April 15th.

Review Comments:

Reason for insufficient reviews of BMPs

BMP	Required	Reviewed	Explanation
SS-5 Soil Binders	1	0	Not observed at time of review
SS-7 Geotextiles, Plastic Covers, Erosion Cont Blankets	1	0	Not observed at time of review
SC-4 Check Dam	1	0	Not observed at time of review
SC-5 Fiber Rolls	1	0	Not observed at time of review
NS-8 Vehicle and Equipment Cleaning	1	0	Not observed at time of review
NS-9 Vehicle and Equipment Fueling	1	0	Not observed at time of review
NS-10 Vehicle and Equipment Maintenance	1	0	Not observed at time of review
NS-12 Concrete Curing	1	0	Not observed at time of review

Exhibit 4. South Avenue On-Ramp Project—a recent oversight inspection indicated that the SWPPP was reflective of current site conditions.

JLM
10/13/09

Category: Alpha Checklist	Answer	Result
Is there an approved SWPPP or WPCP on file?	Yes	
Does the SWPPP or WPCP appropriately reflect current project operations?	Yes	
Is the SWPPP or WPCP (or amendments) adequate and does it address the Contractor's yard, staging area, storage of material, waste site directly related to the project?	Yes	
Is an annual re-certification of the project SWPPP required?	Yes	
Is the annual re-certification of the project SWPPP on file?	Yes	A
Do site inspections by the Contractor meet the minimum inspection frequency specified in the contract?	Yes	A
Do site inspections by RE staff meet the minimum inspection frequency specified in the SWMP?	Yes	A
Is Sampling and Analysis Plan required for sediments per project WPC SSP?	Yes	
Are proper documentations for implementing sampling and analysis for sediments on file?	Yes	A
Is Sampling and Analysis Plan required for non-visible pollutants per project WPC SSP?	Yes	
Are proper documentations for implementing sampling and analysis for non-visible pollutants on file?	NA	
Is a Dewatering and Discharge Plan required?	No	
Is there documentation on-file that a pre-construction meeting was conducted, including discussion of SWPPP or WPCP requirements?	Yes	
Is there expansion beyond the contract specified limit for active DSA(s)?	No	
Are Contractor's employees and subcontractors properly trained to identify hazardous and solid waste and on hazardous waste and	Yes	A

Exhibit 5. South Avenue On-Ramp Project—a recent oversight inspection indicated that the SWPPP was reflective of current site conditions.

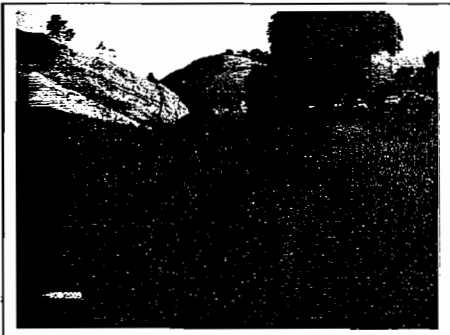
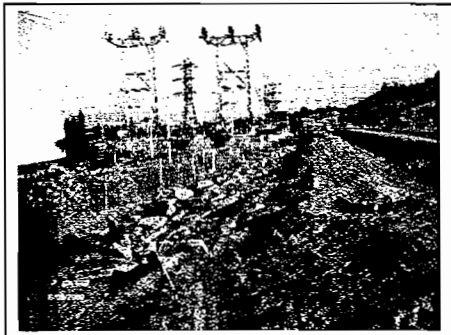
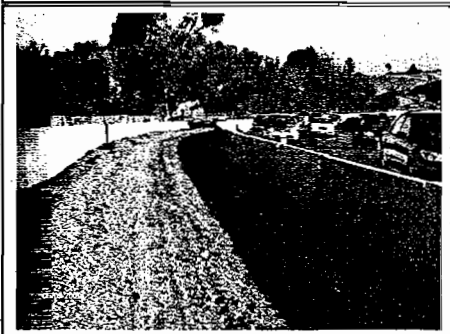
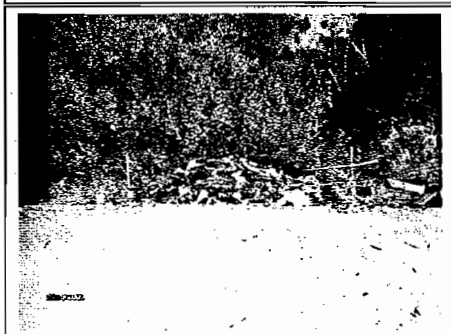

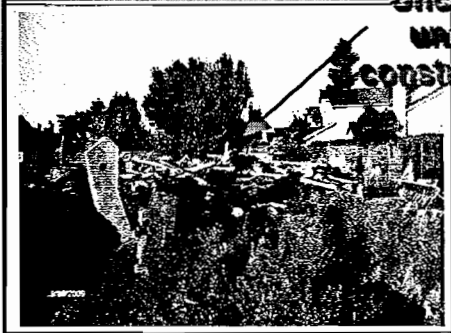
5/9/09

Non-Rainy Season				SWPPP	X	WPCP	
April 16 - October 14) Inspection Report				FY Report #	17	Project Rpt #	19
CO-RTE-P.M.	04-680-M5.2/R10.9			Project EA :	253794		
RE Name:	Satinder Grewal			RE Phone:	510 668 4923		
OS-RE Name	N/A			RE Fax:	510-668-4968		
Project WPC Inspector :	Behrooz Izadi			Insp Phone	510 668 4944		
Contractor:	Bay Cities Paving & Grading, Inc.			Inspection Date:	09/09/09		
Permit							
Participants	Yulius Yadegar			Behrooz Izadi of Caltrans			
Inspect Type:	Rain	Pre	During	Post	Regular	X	Staff req
							Dragonair request
Inspection Score	Red Flag- Major or critical deficiencies exist that require immediate attention. Yellow Flag - Minor deficiencies exist. (requires prompt attention) XX Green flag - Minor or insignificant deficiencies exist. Not Rated - Not a compliance inspection.						
Office Review:				Yes	No	Comments	
1. SWPP/WPCP Approved by RE				X			
2. Annual certification complete & on file for SWPPP				X			
3. Staff Inspection Report frequency compliant with Blue Memo				X			
4. CT & Contractor Inspection reports in Category 20 project files				X			
5. Inspection Reports appropriate level of detail				X			
6. CT Insp. Reports/files include Photographs				X			
7. Plan amendment on file & SWPPP is up to date				X			
8. Separate Dewatering Plan				X			
9. Date of last project insp.:				X			
Job Description:				Widening, ramp meters and roadway rehabilitation			
Rating Justification:				Green flag: Minor tracking; Concrete debris; public and employees trash and liters; construction generated wastes are among the minor issues required attention.			
General Observations:							
Construction activities were going on through out the project. DI protections were in good condition, however some needed maintenance prior to rain event. Pavement area behind the "K" rails should be cleaned to prevent from being transported to travel ways by means of traffic and rain or watering. Construction generated waste should be picked up and hauled away at least weekly. Minor tracking was noticed on SB 680 off and loop on ramps to and from Washington Boulevard should properly be cleaned. Public and employees trash and liter is increasing daily and AC grindings at Washington Interchange should have perimeter control or cover prior to rain event.							
The following issues need correction:							
1. Construction generated waste should be removed and hauled away (photo # 10-12) 2. AC grindings should have perimeter control or plastic cover prior to a rain event (photo # 13-14). 3. Fuel containers curing compound and paints should be stored in secondary container (photo # 15-17). 4. Spilled liquid behind the container box should be cleaned (photo # 18).							

District -4 Construction Water Quality Unit 1 09/09/09

Exhibit 6. Sunol Grade/Route 680 Roadway Rehabilitation Project—outstanding issues had not been corrected through adequate enforcement of the contract conditions as of October 7, 2009, the date of the EPA Audit Team's site visit.


10/9/09
SC

	
<p>7. AC grindings mixed with granular material spread at this location it should be segregated, removed and hauled away.</p>	<p>8. CTB rubles should be removed and hauled to recycling plant.</p>
	
<p>9. Paved section behind the "K" rails should be cleaned prior to rain event.</p>	<p>10. Construction generated waste should periodically be removed and hauled away.</p>
	
<p>11. Construction generated waste should periodically be removed and hauled away.</p>	<p>12. Construction generated waste should periodically be removed and hauled away.</p>

4

Exhibit 7. Sunol Grade/Route 680 Roadway Rehabilitation Project—Photograph 12 above corresponds to the area shown in Appendix E, Site Visit No. 11, Photograph 5 of this audit report.

10/8/09
SL

	
<p>13. AC grindings should be either covered or perimeter control prior to rain.</p>	<p>14. AC grindings should be either covered or perimeter control prior to rain.</p>
	
<p>15. Fuel containers should be stored in the back of pick up.</p>	<p>16. Paint buckets curing compound should be stored in the tool shed or secondary container.</p>
	
<p>17. Paint buckets should be stored in the tool shed or secondary container.</p>	<p>18. Spilled liquid should be cleaned.</p>

5

Exhibit 8. Sunol Grade/Route 680 Roadway Rehabilitation Project—Photograph 18 above corresponds to the same asphalt release agent and petroleum products (lacking secondary containment) shown in Appendix E, Site Visit No. 11, Photographs 6—8 of this audit report.

10/7/09 SC

Non-Rainy Season				SWPPP	X	WPCP	
April 16 - October 14) Inspection Report				FY Report #	8	Project Rpt #	8
CO-RTE-P.M.	04-A-680-R10.5/31.1			Project EA :	04-A-520		
RE Name:	Andy Chang			RE Phone:	510 668 4929		
OS-RE Name	N/A			RE Fax:	510-668-4968		
Project WPC Inspector :	Behrooz Izadi			Insp Phone	510 668 4944		
Contractor:	Bay Cities Paving & Grading, Inc.			Inspection Date:	09/28/09		
Permit							
Participants	Yullus Yadegar			Behrooz Izadi of Caltrans and Justin DiFuria contractor SWPPP manager.			
Inspect Type:	Rain	Pre	During	Post	Regular	X	Staff req
							Dragonair request
Inspection Score	Red Flag - Major or critical deficiencies exist that require immediate attention.						
	Yellow Flag - Minor deficiencies exist. (requires prompt attention)						
	XX Green flag - Minor or insignificant deficiencies exist.						
	Not Rated - Not a compliance inspection.						
Office Review				Yes	No	Comments	
1. SWPP/WPCP Approved by RE				X			
2. Annual certification complete & on file for SWPPP				X			
3. Staff Inspection Report frequency compliant with Blue Memo				X			
4. CT & Contractor Inspection reports in Category 20 project files				X			
5. Inspection Reports appropriate level of detail				X			
6. CT Insp. Reports/files Include Photographs				X			
7. Plan amendment on file & SWPPP is up to date				X			
8. Separate Dewatering Plan				X			
9. Date of last project insp:				X			
Job Description:		The roadway to be widened and the pavement to be rehabilitated.					
Rating Justification:		Green flag: Surplus AC and PCC rubles; Secondary container issues, leaking concrete washouts, construction generated waste are among the issues need correction.					
General Observations:							
Construction activities were going on through out the project. DI protection will be removed and replaced since the design of silt socks was deficient. Top of the slope BMP measures is damaged should be restored prior to on set of rain. Construction generated waste should periodically be removed and hauled away. Surplus PCC and AC dumped on the side of pour or road should be removed and hauled away. Concrete washouts at Vargas Interchange are full to capacity and leaking should be removed and replaced. An entrance and exit was recommended to be installed opposite side of Vargas yard see photo # 9. ESA and silt fences are damaged by rolling rocks at the toe of the slope in front of retaining walls along the project should be corrected. Mechanic has done maintenance on equipment and dumped substantial amount of grease on the ground should be cleaned.							
The following issues need correction:							
<ol style="list-style-type: none"> 1. An entrance and exit was recommended be installed at this location (photo # 9). 2. Two concrete washouts at Vargas Yard are leaking should be removed and replaced (photo # 18). 3. Secondary containment is an issue it should be corrected by next visit (photo # 11-12). 4. Surplus PCC and AC at retaining walls and side of the road should be picked up (photo # 13-16). 5. Grease dumped on the ground during the maintenance of equipment should be cleaned (photo # 17-18). 							



District -4 Construction Water Quality Unit

1

09/28/09

Exhibit 9. Sunol Grade/Route 680 Roadway Rehabilitation Project—Outstanding issues had not been corrected through adequate enforcement of the contract conditions as of October 7, 2009, the date of the EPA Audit Team's site visit.

10/2/09 SC

	
<p>7. Water truck on hand to help keep both dust under control and moisturize the compacting materials</p>	<p>8. Geo textile netting on hand at Vargas Yard.</p>
	
<p>9. It was recommended to install an entrance and exit at this location if it is going to be used as an entrance and exit.</p>	<p>10. Both of these washouts are leaking should be removed and replaced.</p>
	
<p>11. Gas containers and pipe soup should be in the back of pick up or secondary container.</p>	<p>12. 5 gallon bucket has oil and two 55 gallons have some curing compound it it should be stored in secondary</p>

4

Exhibit 10. Sunol Grade/Route 680 Roadway Rehabilitation Project—Photograph 9 above corresponds to the same construction entrance shown in Appendix E, Site Visit No. 15, Photographs 8—9 of this audit report.

10/2/09 52

Caltrans

State of California
Department of Transportation
48499 Milmont Blvd
(415) 396-9192 FAX
Sunol Grade Project (2)

Sept. 25, 2009
04-45204
A13-680-10.0/31.1
Route 680 Roadway Rehabilitation

Field Safety Recommendations / Storm Water Pollution Prevention Plan Punch-list No. 558

Field Review & General Observations:
The following items were observed and/or needs attention or correction:

Median Staging (Stoneridge – Calaveras)

- The newly paved lanes need to be swept clean of public trash.

Calaveras (84) Ramps staging (Paloma Rd)

- Surplus AC dumped on the ground should be cleaned and removed off the site.
- Few temporary traffic sign are down at Calaveras Off-ramp, should be restored or removed.
- Public & Employees trash should pick up prior to getting out of hand, Calaveras ramps.
- Newly paved ramps should be swept Free debris free
- Most DI protections installed between Calaveras & Andrade are not practical, need to be replaced.
- Few DIs at Calaveras Off-ramp without protection, need to be protected prior to rainy season

Andrade – Sheridan staging (Shoulder)

- Clearing & Grubbing generated waste should be hauled away periodically.
- Pavement inside the K-rails should be swept free of debris prior to be transported onto roadway.
- Construction waste on walls no: 18 & 19 vicinity should be picked up & hauled away
- Nails speared on ground at Wall no: 18 vicinity should be picked up and dumped into dumpster
- Public & Employee's track should be picked up and dumped into dumpsters
- A regularity sign is done at Andrade staging crash cushion, need to be restored.

Sheridan - Vargas staging (Walls 13, 14)

- Paved area at I680 widow should be swept free from debris prior to be transported onto roadway
- Stockpiles of backfill material at Sheridan area, should have a perimeter control prior to rain
- Abundant DIs should be covered by plywood a marked removal.
- Dirt access road between Sheridan & Vargas should be watered more often to prevent dust
- Surplus AC rubbles should be consolidated and hauled cleaned up.
- The excising sanitary washout unit needs maintenance & maintenance date.

Vargas staging

- Minor tracking on Vargas Rd. An entrance/exit unit is highly recommended.
- Overpowered silt fence at the toe of wall 13, should be restored.
- Nails spread on ground at the foot of wall # 13 should be picked up and removed

Exhibit 11. Sunol Grade/Route 680 Roadway Rehabilitation Project—issues identified by the Caltrans Construction Storm Water Coordinator's inspector in a SWPPP punch-list, generated from inspections conducted prior to September 25, 2009, demonstrate the issues had been outstanding for a longer period of time.

10/24/09
SL

11.0 Records Showing incidents of Illicit Discharges/connections and resolution 2007/2008 FY.

The Illicit connections/discharges are documented and notification letters are sent to the discharger or responsible parties. A meeting is arranged with all the parties to discuss the discharges and possible solutions.

The table below shows the IC/ID summary for FY 2007/ 2008.

District	Number of Incidents	# in Progress#	# Resolved from Prior Fiscal Year	#Resolved during FY 2007-08	# Referred to RWQCB or Local Agency
1	None	None	None	None	None

Exhibit 12. District 1 records claim that there were no IC/ID incidents in Fiscal Year 2007-2008.

Exhibit 13. Recordkeeping form developed for use in illicit connection detection, reporting, and removal.

16. From: Gregory Lockshaw

From: Gregory Lockshaw

The only procedures I can find are listed in the Caltrans Storm Water Quality Handbook, Maintenance Staff Guide, May 2003, found on the Maintenance Home page on the intranet. This is located in

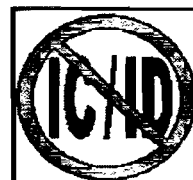
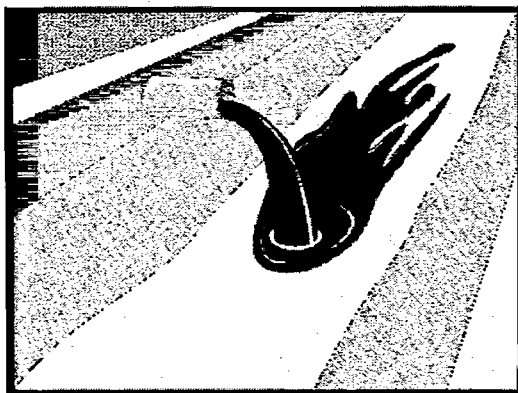
Appendix C.22.3. This document instructs Maintenance employees to notify the District NPDES/Stormwater Coordinator. Because many cases are little more than a radio call the probability of an IMMS record is limited. We could pull the F6 Activities from IMMS for what ever select years they desired (attached below for FY 07/08). Historically we have not had many records. These records would relate to items 5,6 & 7. A preliminary run of data for FY 08 brought up 10 work orders statewide from 8 Districts for all F6 Activities.

10/21/09
52

Exhibit 14. Records provided by Caltrans explain that Maintenance staff may not be formally documenting all IC/ID incidents.

Illicit Connection/Illegal Discharge Detection and Reporting

NS-6



Standard Symbol

BMP Objectives

- Soil Stabilization
- Sediment Control
- Tracking Control
- Wind Erosion Control
- Non-Storm Water Management
- Materials and Waste Management

Definition and Purpose Procedures and practices designed for construction contractors to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents to the Resident Engineer (RE).

Appropriate Applications ■ Illicit connection/illegal discharge detection and reporting is applicable anytime an illicit connection or discharge is discovered or illegally dumped material is found on the construction site.

■ This best management practice (BMP) applies to all construction projects.

Limitations ■ Unlabeled or non-identifiable material shall be assumed to be hazardous.

■ Illicit connections and illegal discharges or dumping, for the purposes of this BMP, refer to discharges and dumping caused by parties other than the contractor.

■ Procedures and practices presented in this BMP are general. Contractor shall use extreme caution, immediately notify the RE when illicit connections or illegal dumping or discharges are discovered, and take no further action unless directed by the RE.

■ If pre-existing hazardous materials or wastes are known to exist onsite, the contractor's responsibility will be detailed in separate special provisions.



Caltrans Storm Water Quality Handbooks
Construction Site Best Management Practices Manual
March 1, 2003

Section 7
Illicit Connection/Illegal Discharge Detection and Reporting **NS-6**
1 of 3

Exhibit 15. Excerpt from Caltrans guidance intended for construction contractors that provides clear direction on how to identify IC/IDs using field observations and related reporting

Date of Insp. Mth-Yr	Date of Compl. Mth-Yr	Co	Route	P.M.	Type of Facility (Bridge, CMP, RCP, etc.)	Size (in)	Length (ft)	Type of Work V - Vector E - Excavator B - Backhoe Veg. - Vegetation CS - Confined Space ETC. (replaces, line)	Contract or Maint. Work	If Contract Requested or Take Pictures, P.L.P. Date-7	Is Work Required up or Down stream of Facility (within ft.)	Will Equipment be in the stream Bed Y/N	Wet or Dry stream Bed	Est. Material Removed, or Type and Amount to be Placed in Stream Bed	Natural Stream or Part of Highway Drainage (which one)	Pish Stream Yeatic, Unknown	Permits Required Agency- Fed, Corp, WIC Coastal Comm.
		DN	101	14.05	CMP	18	64										
		DN	101	14.73	CMP	18	60										
		DN	101	14.75	CMP	18	52										
		DN	101	14.81	CMP	24	104										
		DN	101	14.88	CMP	24	64										
		DN	101	14.98	CMP	18											
		DN	101	15.01	CMP	18	59										
		DN	101	15.08	CMP	18	42										
		DN	101	15.2	CMP	18	56										
		DN	101	15.34	CMP	18	102										
		DN	101	15.4	CMP	18	56										
		DN	101	15.54	CMP	18	72										
		DN	101	15.8	CMP	18	80										
		DN	101	15.88	CMP	36	215										
		DN	101	15.78	CMP	36	198										
		DN	101	15.98	CMP	18	60										
		DN	101	16.03	CMP	36	100										
		DN	101	16.09	CMP	36	140										
		DN	101	16.22	CMP	18	59										
		DN	101	16.28	CMP	18											
		DN	101	16.82	CMP	36	104										
		DN	101	16.83	CMP	18											
		DN	101	16.97	CMP	18	60										
		DN	101	17.04	CMP	18	55										
		DN	101	17.12	CMP	18	80										
		DN	101	17.19	CMP	18											
		DN	101	17.28	CMP	18											
		DN	101	17.4	CMP	18	50										
		DN	101	17.51	CMP	18	108										
		DN	101	17.89	CMP	18	54										
		DN	101	17.8	CMP	18											

Page 5

Exhibit 16. Example of storm drain inlet cleaning record provided by maintenance personnel at the Crescent City maintenance facility in District 1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DRAIN AND DROP INLET INSPECTION
MTC-08 (REV 1/1/97)

CLEANING AND INSPECTION OF DRAINS AND FACILITIES

(PLEASE PRINT)

RESIDUAL CENTER RED BLUFF MAINTENANCE/ 634

COUNTY TEHAMA ROUTE SR 99

SUPERVISOR _____

INSPECTED BY _____

Page 1

DISTRIBUTION

WHITE MAINTENANCE STORMWATER COORDINATOR

YELLOW SUPERINTENDENT

PINK SUPERVISOR

ADA Notices

For information with sensory disability, this document is available in alternate formats. For information call (711) 844-4110 or TDD (711) 844-4880 or write to: California Department of Transportation, 1150 N Street, MS-40, Sacramento, CA 95814.

DATE	POST MILE	DIRECTION E/W (V/S) S/N	SHOULDER		CULVERT STATUS	CLEANED		QUANTITY OF MATERIAL PER DRAIN	NUMBER OF DRAINS CLEANED	CONDITION OF DRAIN IN TYPE OF DAMAGE	COMMENTS
			LEFT	RIGHT		YES	NO				
11-04-08	24.84	S/B	X	X	1/2 Bugged			30"		good	5' spec. 30" x 30" x 10' x 10' Bridge
24-04-08	24.84	"	X	X						"	
24-08-08	24.77	"	X	X						"	
24-08-08	24.66	"	X	X				6 Trees		good	Need Bugged Bridge left side needs Bugged
24-14	24.13	"	X	X				2 Trees		good	Box Culvert Bridge
23-03	23.63	"	X	X	1/2 Bugged					good	Box Culvert Bridge
22-04	22.54	"	X	X	open					good	Box Culvert Bridge
21-05	21.65	"	X	X	"					good	Box Culvert Bridge
21-13	21.13	"	X	X	open					good	Box Culvert Bridge
20-17	20.17	"	X	X	1/2 Bugged					"	Box Culvert Bridge
19-06	19.6	"	X	X	"					"	Box Culvert Bridge
19-04	19.54	"	X	X	open					"	Box Culvert Bridge
18-05	18.05	"	X	X	"					"	Box Culvert Bridge
17-38	17.38	"	X	X	"					"	Box Culvert Bridge
17-34	17.34	"	X	X	"					"	Box Culvert Bridge
17-28	17.28	"	X	X	"					"	Box Culvert Bridge
17-04	17.04	"	X	X	"					"	Box Culvert Bridge
16-97	16.97	"	X	X	"					"	Box Culvert Bridge
TOTAL											

Exhibit 17. Example of storm drain inlet cleaning record provided by maintenance personnel in District 2

Exhibit 18. Example of storm drain inlet cleaning record provided by maintenance personnel at the Walnut Creek East maintenance facility in District 4

CA5000003 - Caltrans MS4 - District 1 - 10x109

MS4 PROGRAM COMPLIANCE EVALUATION

Records Requested:

Program Management

- ① Current SWMP document and any significant changes/modifications - need July 5, 2008 McSwain memo
- ② SWMP Appendix D: Statewide Storm Water Quality Practice Guidelines
- ③ Attached CD and Appendices for the Annual Report FY07-08
- ④ Program organizational chart and/or a description of the departments involved in the implementation of your MS4 program and their responsibilities.

Construction

- ⑤ Construction-related regulatory mechanisms and legal authority
- ⑥ District inventory of current active construction sites in the permit area of Districts 1 - 4 (preferably maps by District showing location and active segment) - Obtain from District
- ⑦ Inspection and enforcement procedures/protocol

Post-Construction

- ⑧ Post Construction BMP Manual/Guidelines
- ⑨ Requirements for continued maintenance - need Maintenance Staff Guide (hardcopy)
- ⑩ District inventory of post-construction BMPs in the permit area of Districts 1 - 4 (preferably maps by District showing location)

Maintenance Program

- ⑪ Statewide inventory of road segments with slopes that are prone to erosion
- ⑫ Established 5-year schedule of inspections for roadway erosion control, and records - CD for Jones that demonstrate inspections are conducted in accordance with the 5-year schedule
- ⑬ Statewide inventory of all drainage inlets that pose a significant threat to water quality (based on accumulation or otherwise); and records that demonstrate removal of all waste from those inlets on an annual basis prior to the winter season (FY07-08)
- ⑭ District inventory of municipal facilities/corporate yards in the permit area of Districts 1 - 4 (preferably maps by District showing location and activities conducted at the site) - Obtain from District

Highway Surveillance and IC/ID

- ⑮ Spill records from IMMS (FY07-08) - Spill records but not being used
- ⑯ Procedures for receiving and investigating public and employee complaints of IC/IDs - Maint Guide App C p. 5-7 E 403-6
- ⑰ Procedures on how to identify IC/IDs, conduct investigations of IC/IDs, and identify the source
- ⑱ Procedure to track all reports of IC/IDs and the action taken on them - Staff Guide
- ⑲ Regulatory mechanism(s) prohibiting illicit non-storm water discharges to the MS4
- ⑳ Records showing incidents of illicit discharges/connections and resolution (2008 Calendar Year) - Obtain from District, case file "examination"
- ㉑ Example/case file of an illicit discharge incident where enforcement was used (ideally full extent of enforcement authority for each District) - Obtain from District
- ㉒ Records of major outfall inspections, dry weather screening, or other means of actively seeking and eliminating illicit connections/discharges (2008 Calendar Year) - Obtain from District
- ㉓ Municipal Coordination Plan - never developed per Joyce.
- ㉔ Maps of Additional Municipal Facilities (email to print)

Exhibit 19. Record of documentation requested from District 1

Program Subject Area - Highway Surveillance and IC/ID

10/02/09
SC

Request #10- Regulatory mechanism(s) prohibiting illicit non-storm water discharges to the MS4

Section 670(a)(2) of the Streets and Highways Code requires that encroachments onto the State Highway System be issued permits.

Regarding litter and illegal dumping, Section 721(c) of the Streets and Highways Code allows the Department to immediately remove from any state highway any encroachment that consists of refuse. The state has empowered the California Highway Patrol with the authority to enforce laws applicable to the use of state highways. (CA Vehicle Code § 2400.) The Department relies on the CHP for enforcement of applicable laws pertaining to the State Highway System.

The Department has authority to prevent illicit connections and other unauthorized non-stormwater discharges to the state highway system. The following is excerpted from the California Streets and Highways Code Sections 725-727:

It is unlawful for any person to permit water to be turned from his land to any State highway which results in damage to the highway.
It is unlawful to do the following:

(A) Drain water, or permit water to be drained from his lands onto any State highway by any means that results in damage to the highway.

(B) Obstruct any natural watercourse so as to:

prevent, impede or restrict the natural flow of waters from any State highway into and through the watercourse, unless other adequate and proper drainage is provided.

(2) Cause waters to be impounded within any State highway, damaging the highway.

(3) Cause interference with, or damage or hazard to public travel.

(C) Store or distribute water for any purpose so as to permit it to overflow onto, to saturate by seepage, or to obstruct any State highway, with resulting damage to the highway.

Section 720 requires that Caltrans provide a written notice of encroachment. If the encroachment is not corrected and repairs made at the violator's expense after written notice, Caltrans may make corrections and repairs and recover by law the cost of repairs. Section 720 also permits Caltrans to collect the sum of \$10 for each day the drainage; diversion, overflow or seepage is permitted to continue after service of notice, together with the costs and expense incurred with such action.

Procedures for resolving such unauthorized / illicit non-storm water discharges are outlined in the Department's Encroachment Permits Manual;
http://www.dot.ca.gov/hq/traffops/developserv/permits/encroachment_permits_manual/index.html

Attached is a copy of the Notice (form) used to enforce removal of an illegal encroachment.

Exhibit 20. Explanation of Caltrans' regulatory mechanism(s) prohibiting illicit non-storm water discharges to the MS4, and excerpt from the California Streets and Highways Code

10/21/09
J

**12.0 Example/Case File of an Illicit
Discharge Incident where enforcement
was used (ideally full extent of
enforcement authority for D1)**

None

Exhibit 21. Caltrans District 1 indicated that enforcement had never been used.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZ

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DISTRICT DIRECTOR
1657 RIVERSIDE DRIVE
P. O. BOX 496073
REDDING, CA 96049-6073
PHONE (530) 225-4640
FAX (530) 225-3019



*Flex your power!
Be energy efficient!*

October 4, 2007

North Coast Regional Water Quality Control Board
Attn: Ms. Mona Dougherty
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Dear Ms. Dougherty:

This letter follows the August 27, 2007, verbal notification of an illicit discharge. The discharge consisted of sewage flowing into a Caltrans drain inlet located in Weed, at approximately 270 North Weed Boulevard, also State Route 265. The inlet discharges to a small watercourse that likely is a tributary to Boles Creek.

A contractor, working on a Caltrans road-rehabilitation project, identified the sewage leak occurring at a crack on the pavement surface. The leak appeared to originate either from a lateral or where the lateral connects to the collector. This could not be confirmed, because there was no excavation. Caltrans personnel installed gravel bags to protect the drain inlet. This measure seems to be regulating the amount of sewage flowing into the drain but it is not preventing it. Some raw sewage accumulates in the street, apparently after activities in the adjacent apartment building generate wastewater.

Both the City of Weed and the Siskiyou County Environmental Health Department have been notified of this situation.

Please contact me at (530) 225-4640 if you have any questions.

Sincerely,

Miguel A. Villicana
District 2-NPDES Coordinator

C: Mr. Mark Harvey, Maintenance SW Coordinator

Enclosure

"Caltrans improves mobility across California"

Exhibit 22. Caltrans District 2 provided a case example which did not demonstrate resolution of the incident

13. From: Gregory Lockshaw

There is no Statewide inventory of drainage inlets that pose a significant threat to water quality in IMMS. To my knowledge this does not exist anywhere. District 07, 11 & 12 may have some select areas due to the mandates but again that would be HQ/District Stormwater.

13. From: Frank Mele

Regarding drain inspection and cleaning this is also a District records issue. In accordance with the NPDES Permit 1.1.c the Maintenance Supervisors inspect the drains in their respective jurisdictions prior to each winter season. Work orders are set up for crews to clean the drains that need it prior to the rainy season. We can run IMMS reports for the inlets that have been inspected and cleaned. The information can be run for all inlet types not just grated inlets.

The guidance is found in the Maintenance BMP Staff Guide. C.22.1 and C.22.2 are attached.



C22.1 and C22.2 MTCE BMPs.pdf

Here is summary information from my files for FY07 and FY 08. You may wish to contact Gregory Lockshaw to have the information run for the past 5 years however an excel file of the county route and post mile limits of the drains inspected will have thousands of lines of data.



Culvert Inspection & Clean FY07 Reports Culvert Inspection & Clean FY08 Reports

Exhibit 23. Caltrans response to request for documentation of an inventory of storm drain inlets that pose a significant threat to water quality. Note this response was included in the District 1 response binder.

10/24/09
SL

12. From: Gregory Lockshaw

The 5 year Slope Inspection documentation was maintained at a District level up until the current Fiscal Year, 2010. There is minimal information in IMMS at this time and could not be used to substantiate the 5 year schedule. We may be able to provide information for District 10 & 03 for Fiscal Year 08/09 (attached below). Available FY 09/10 data attached also.

12. From: Frank Mele

The Department's Statewide NPDES Permit states the following under Maintenance Program Management.

- (3) Identify road segments with slopes that are prone to erosion and discl of sediment and stabilize these slopes to the extent possible.

The following information document describes how the Division of Maintenance complies with this part of the NPDES permit.

attachment "Slope Inspection Maintenance Policy.pdf"

12. From: Eric Uyeno (CMAS), IMMS Report Specialist

Development of the new Storm Water Slope Inspection Report is complete. The report is available for use on the IMMS reports website. You can access the website by typing "immsreports" into your Internet Explorer address bar and clicking the "Go" button. I have also provided a link below.

http://immsreports:7782/discoverer/app/directPartialConnect?password=reports&databaseIdentifier=irpt&userName=reports&connectionLocale=browser_selected&event=connect&partial=&source=&clientType=viewer&connectionAccessType=RELATIONAL&partialTargets=

Exhibit 24. Until recently, the individual Caltrans Districts maintained slope inspection documentation.

10/24/09
2/2/09

State of California Department of Transportation
HQ Office of Roadside Stormwater Information Sheet
October 2009



Division of Maintenance
Roadside Slope Inspection and Remediation
NPDES Permit I.1.a.3 SWMP Section 5.3.4

Department/District Roadside Slope Inspection Protocol

The Department of Transportation Division of Maintenance is mandated by the Statewide NPDES Permit Section I to identify road segments with slopes that are prone to erosion and discharge of sediment and stabilize these slopes to the extent possible and to implement the program identified in the Statewide Storm Water Management Plan (SWMP). In accordance with the SWMP, the Division of Maintenance periodically inspects roadside vegetated slopes to determine the need for remedial measures. Inspections are conducted along all roadsides at least once during an established five year cycle. Since these slope inspections and slope stabilizations are required by the NPDES Permit, they have been incorporated as part of the Division of Maintenance F Family environmental compliance activities. The Division's Integrated Maintenance Management System (IMMS) database allows for the direct input of slope inspection information. The Division has also developed a slope inspection form (CT-MAINT-NPDE-S005) for field use which can be used to document information for future download. This statewide information is provided to the Division of Environmental Analysis for inclusion in the Annual Report to the State Water Resource Control Board.

Who Conducts the Inspections

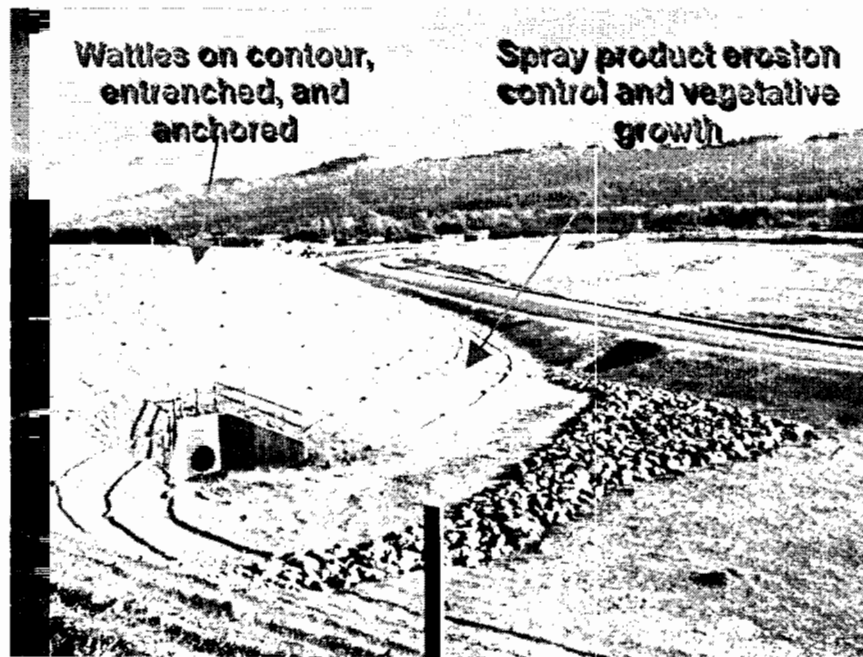
The NPDES slope inspection program is coordinated by the District Maintenance Storm Water Coordinator and implemented by District staff. Slope inspections required by the SWMP are conducted by Department staff. For slope inspections with special considerations such as safety (loose soil, rock on roadway), landscape degradation and structural instability, District Maintenance engineers, the District NPDES Coordinator and landscape and geotechnical specialists may be called to the site depending on the situation. Minor roadside slope repairs for stabilization are completed by District Maintenance crews. When complex slope stabilization requirements are identified, the Maintenance Storm Water Coordinator refers the project to a District multi-disciplinary slope team for review and development of remediation options. These projects are then forwarded to the State Highway Operation and Protection Program (SHOPP) or other appropriate program for funding and repair.

Maintenance Slope Inspection and Remediation Page 1

Exhibit 25. Excerpt from an October 2009 document that describes how Maintenance complies with the slope stabilization provisions of the Permit

Appendix C

Photograph Log



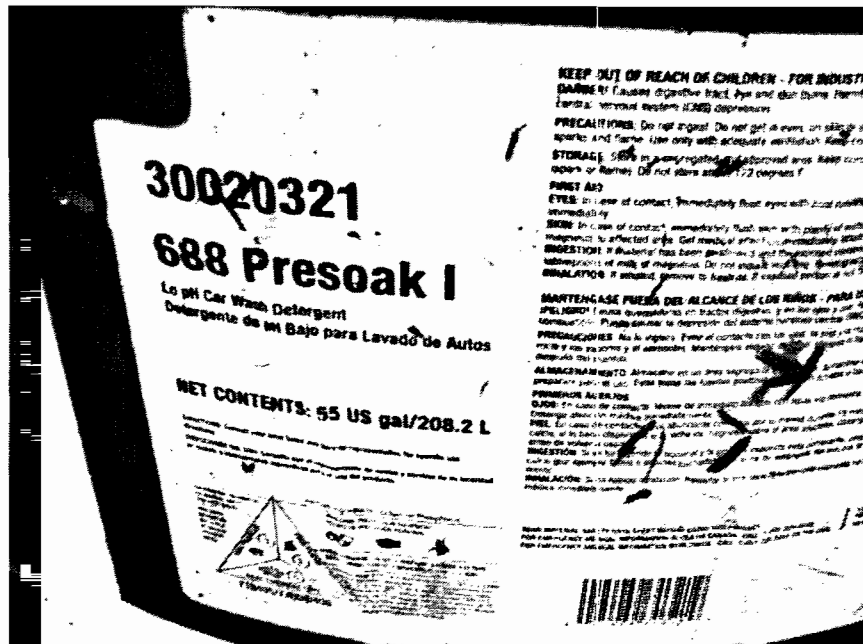
Photograph 1. Alton Interchange Project – Combination of multiple erosion and sediment controls



Photograph 2. Alton Interchange Project – Combination of multiple erosion and sediment controls



Photograph 3. District 2 Red Bluff Slab Project – Open drum of detergent along the highway storm water conveyance system. (Note: Drum appeared empty, possibly due to the missing bung)



Photograph 4. District 2 Red Bluff Slab Project – Close-up view of drum label corresponding to Photograph 3

Appendix D

Construction Program Site Visit Reports

Site Visit No. 1

Thomes Creek Bridge Project Site Visit Date: 10/13/2009

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Thomes Creek Bridge Project
Caltrans District 2

The EPA Audit Team conducted a site visit at the Thomes Creek Bridge project located approximately 3 miles north of Corning, CA at the Interstate 5 Thomes Creek bridge crossing in Tehama County.

The site visit coincided with a precipitation event on October 13, 2009 which produced heavy rains. Precipitation data obtained from the California Data Exchange Center (CDEC) Corning Airport Station, located approximately 3 miles southeast of the Thomes Creek Bridge project, indicated that rain began falling at approximately 1 a.m. on October 13, 2009 and lasted through 5 p.m., October 13, 2009. The total accumulation during this 16 hour period was 2.21 inches of rainfall. The National Oceanic and Atmospheric Administration (NOAA) Atlas 2, Volume XI isopluvial map indicates that 2.5 inches of rainfall would accumulate during a 2 year, 24-hour precipitation event, which is more than the actual 2.21 inches of rainfall that occurred on October 13, 2009. Based on this data, the storm occurring on October 13, 2009 was less than a 2 year, 24-hour event and is therefore considered a common precipitation event. Site conditions observed on October 13, 2009 are summarized below.

Prohibition A.1 of the Permit states the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.” Adequate BMPs were not implemented for the contractor’s staging and material storage areas located up-gradient and adjacent to Thomes Creek. Specifically, adequate BMPs or perimeter controls had not been implemented for the areas of disturbance associated with the contractor staging and material storage areas. For example, a concrete washout was improperly implemented and lined with plastic that had been torn and badly deteriorated (see Photographs 1 and 2), and uncontained concrete waste was observed on the ground surface directly adjacent to the concrete washout (see Photograph 3). Jeff Blin (Caltrans District 2, Resident Engineer), explained that the concrete washout area had been present for a long period of time and was not identified in the project SWPPP. Moreover, a visible discharge of sediment and/or other pollutants was observed leading from the contractor staging and material storage areas to Thomes Creek (see Photographs 4 through 7).


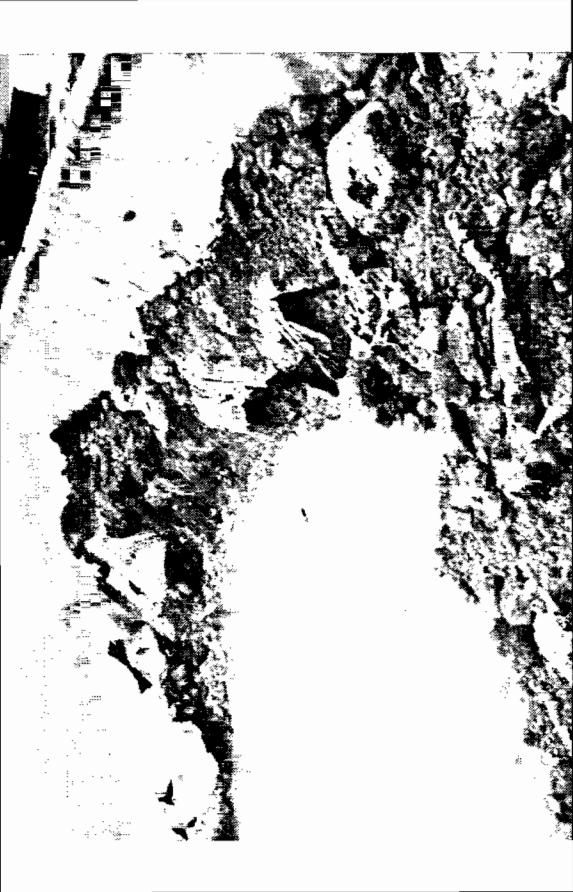


Additionally, adequate BMPs had not been implemented for areas of disturbance located directly adjacent to the flowing Thomes Creek. Although erosion log BMPs had been implemented, the erosion logs were not staked and a discharge of sediment was observed bypassing the BMPs and leading to Thomes Creek (see Photographs 8 and 9).

Provision E.1 of the Permit states “Caltrans shall maintain and implement an effective SWMP.” Appendix D of the Caltrans SWMP, Section 4.5.14, Stockpile Management, states “protection of stockpiles is a year-round requirement. All stockpiles shall be located away from concentrated flows of storm water, drainage courses, and inlets.” BMPs had not been implemented to prevent the discharge of sediment from unconsolidated soils and soil stockpiles located adjacent to the Thomes Creek bridge and west of Interstate 5 (see Photographs 10 and 11). The EPA Audit

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Thomes Creek Bridge Project
Caltrans District 2**

Team observed unconsolidated soils and soil stockpiles located within the reach and bounds of Thomes Creek. As a result, there was a potential for discharge of sediment to Thomes Creek.

Appendix D of the Caltrans SWMP, Section 4.5.10, Waste Management, states “temporary sanitary facilities shall be located away from drainage facilities and watercourses. When subjected to high winds or risk of high winds, as determined by the RE, temporary sanitary facilities shall be secured to prevent overturning.” Adequate BMPs for waste storage, spill prevention and containment had not been implemented for a portable toilet located under the Thomes Creek bridge. The portable toilet was not properly secured and had blown over, resulting in visible chemical and sanitary waste staining on the ground surface (see Photographs 12 through 14). As a result, there was a potential for the contribution of pollutants to storm water runoff.

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Thomes Creek Bridge Project Caltrans District 2	Photograph date: 10/13/2009
		<p>Photograph 1 – Concrete washout unmaintained (e.g., torn and deteriorated plastic liner)</p> <p>Photograph 2 – Close-up view of unmaintained (e.g., torn and deteriorated) concrete washout plastic liner</p>
		<p>Photograph 3 – Concrete waste on the ground surface directly adjacent to the concrete washout</p> <p>Photograph 4 – Evidence of the discharge of pollutants from the contractor staging and material storage areas</p>

<div data-bbox="99 1522 154 1917" data-label="Section-Header"> <h1>Site Photographs</h1> </div>	<div data-bbox="99 682 186 1245" data-label="Text"> <p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Thomes Creek Bridge Project Caltrans District 2</p> </div>	<div data-bbox="99 226 126 575" data-label="Text"> <p>Photograph date: 10/13/2009</p> </div>
---	--	--

<div data-bbox="233 1100 799 1881" data-label="Image"> </div>	<div data-bbox="233 212 799 997" data-label="Image"> </div>
<div data-bbox="808 1079 1425 1881" data-label="Image"> </div>	<div data-bbox="808 212 1425 997" data-label="Image"> </div>

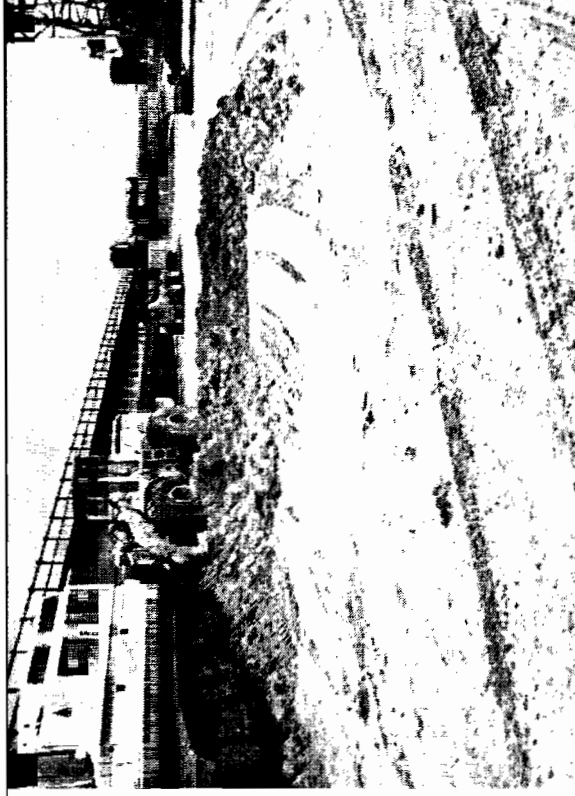
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
 Thomas Creek Bridge Project
 Caltrans District 2

Photograph date: 10/13/2009



Photograph 9—Adequate BMPs were not implemented to prevent the discharge of sediment to Thomas Creek



Photograph 10 – Unconsolidated soils without BMPs



Photograph 11— Soil stockpile without BMPs

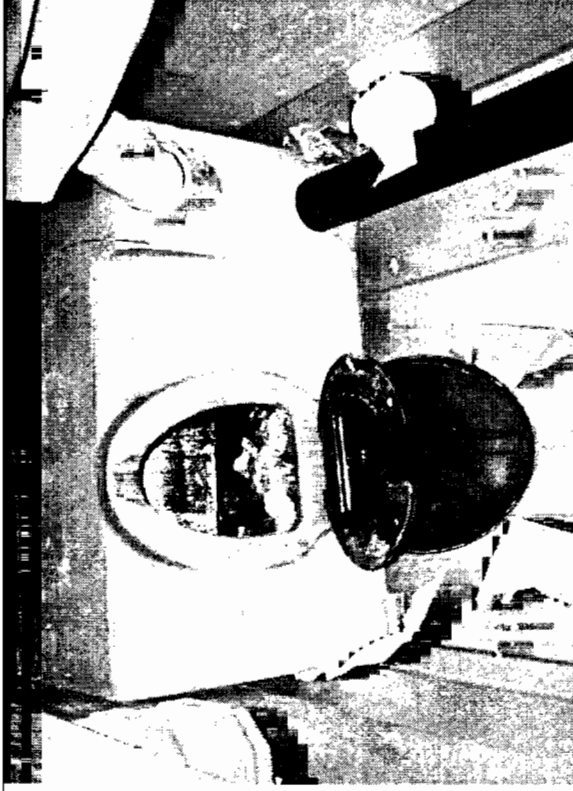


Photograph 12 – View of portable toilet blown over under Thomas Creek bridge

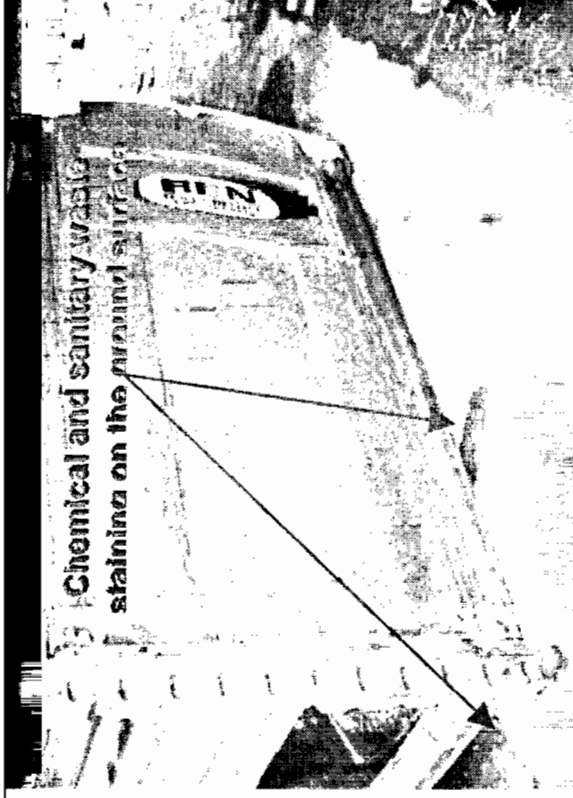
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Thomes Creek Bridge Project
Caltrans District 2

Photograph date: 10/13/2009



Photograph 13—View inside of overturned portable toilet with visible chemical and sanitary waste present



Photograph 14 – Visible chemical and sanitary waste staining on the ground surface

Site Visit No. 2

South Avenue On-Ramp Project Site Visit Date: 10/13/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
South Avenue On-Ramp Project
Caltrans District 2**

The EPA Audit Team conducted a site visit at the South Avenue On-Ramp project located approximately 3 miles south of Corning, CA at the South Avenue and Interstate 5 interchange in Tehama County.

The site visit coincided with a precipitation event on October 13, 2009 which produced heavy rains. Precipitation data obtained from the California Data Exchange Center (CDEC) Corning Airport Station, located approximately 3 miles northeast of the South Avenue On-Ramp project, indicated that rain began falling at approximately 1 a.m. on October 13, 2009 and lasted through 5 p.m., October 13, 2009. The total accumulation during this 16 hour period was 2.21 inches of rainfall. The National Oceanic and Atmospheric Administration (NOAA) Atlas 2, Volume XI isopleth map indicates that 2.5 inches of rainfall would accumulate during a 2 year, 24-hour precipitation event, which is more than the actual 2.21 inches of rainfall that occurred on October 13, 2009. Based on this data, the storm occurring on October 13, 2009 was less than a 2 year, 24-hour event and is therefore considered a common precipitation event. Site conditions observed on October 13, 2009 are summarized below.

Prohibition A.1 of the Permit states the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.” Adequate BMPs were not implemented for the disturbed embankment slope areas associated with three interconnected sediment basins, which ultimately drain offsite via a culvert pipe inlet and drainage pipe leading to Birch Creek. Specifically, adequate structural and non-structural BMPs had not been implemented for the sediment basin embankment slopes (see Photograph 1), and evidence of erosion (e.g., rill and gulley formations) were observed (see Photographs 2 through 6). As a result, there was a discharge of sediment from the interconnected sediment basins, the associated unstabilized embankment slopes, and the disturbed contributing areas of the site to the discharge point, a culvert inlet and drainage pipe leading to Birch Creek (see Photographs 4 and 5).

Adequate structural and non-structural BMPs also had not been implemented for material storage. Specifically, full containers of pipe joint compound were observed adjacent to the standing water in the eastern sediment basin (see Photographs 7 and 8). As a result, there was a potential for the contribution of pollutants to storm water runoff.

Additionally, inappropriate and inadequate BMPs had been implemented for the interconnected sediment basin discharge point, a culvert pipe inlet and drainage pipe leading to Birch Creek. Specifically, a silt fence BMP had been implemented in an area of concentrated flow at the culvert inlet, and had therefore collapsed (see Photographs 9 through 11). As a result, there was a discharge of sediment from the unstabilized up-gradient areas (e.g., sediment basins and disturbed slope areas) to the culvert pipe inlet and discharge pipe which ultimately flows to Birch Creek (see Photographs 12 through 14).

Provision G.5 of the Permit states “Caltrans shall have an inspection program to insure actions are implemented and facilities are constructed, operated, and maintained in accordance with this NPDES Permit and the SWMP.” Provision H.1 of the Permit requires that the SWMP include

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
South Avenue On-Ramp Project
Caltrans District 2**

“site inspections and enforcement.” In an oversight inspection conducted on October 6, 2009, the Caltrans Construction Storm Water Coordinator’s inspector indicated that the SWPPP for the South Avenue On-Ramp project was reflective of current site conditions (see Appendix C, Exhibits 4 and 5). The EPA Audit team conducted a brief review of the SWPPP document and site map on October 13, 2009 and noted that the BMPs indicated on the SWPPP site map did not reflect current site conditions. Specifically, the site map indicated that the disturbed slope areas were to have soil binder BMPs and fiber roll BMPs implemented (see Photograph 16); however, these were not observed onsite. In addition, the discharge point, a culvert pipe inlet (see Photograph 9) which drains offsite to Birch Creek, was not indicated on the SWPPP site map (see Photograph 15). Furthermore, as provided by Jim Rodgers (Caltrans Resident Engineer for the South Ave On-Ramp project), the silt fence BMP at the culvert pipe inlet had been approved by Mr. Rodgers; however, there were no SWPPP amendments and the culvert inlet itself was not shown on the SWPPP site map (see Photographs 15 and 16).

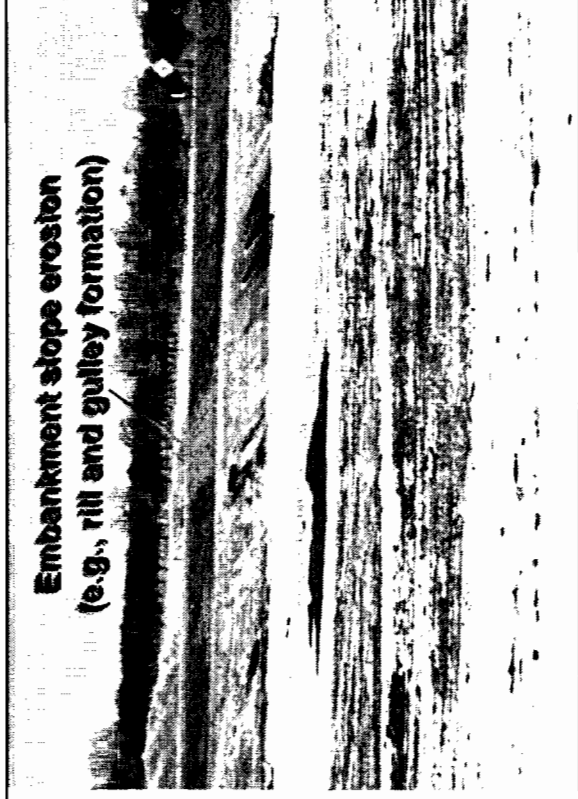
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
South Avenue On-Ramp Project
Caltrans District 2

Photograph date: 10/13/2009



Photograph 1 – View of unstabilized sediment basin and embankment slopes



Photograph 2 – Erosion of unstabilized sediment basin and associated embankment slopes



Photograph 3 – Sediment basin embankment slope erosion (e.g., gully formation) and failure



Photograph 4 – Adequate BMPs had not been implemented to prevent the discharge of sediment to the culvert inlet/drainage pipe leading to Birch Cr.

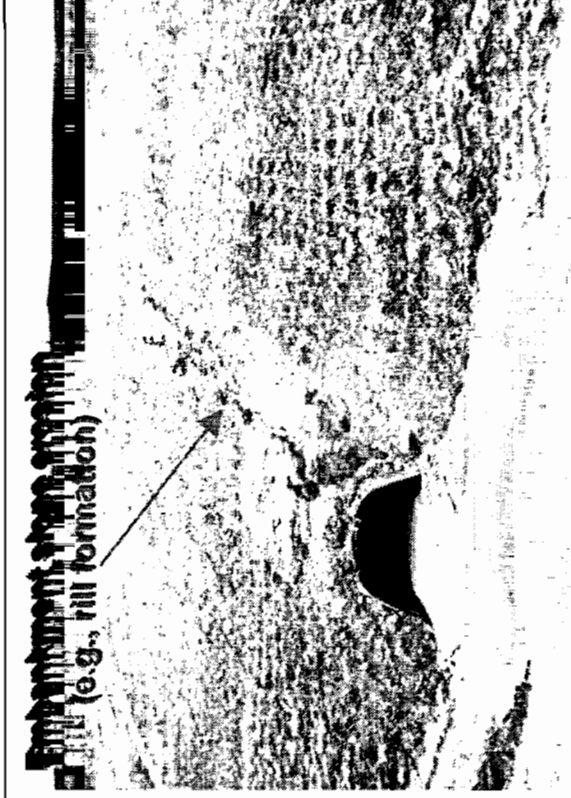
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
South Avenue On-Ramp Project
Caltrans District 2

Photograph date: 10/13/2009



Photograph 5— Close-up of area in Photograph 4 depicting erosion (e.g., rill formation) and inadequate BMPs located adjacent to discharge point







Photograph 6 – Embankment slope erosion (e.g., rill formation)



Photograph 7—Pipe joint compound located in the eastern sediment basin



Photograph 8 – Close-up view of the full container of pipe joint compound in the eastern sediment basin

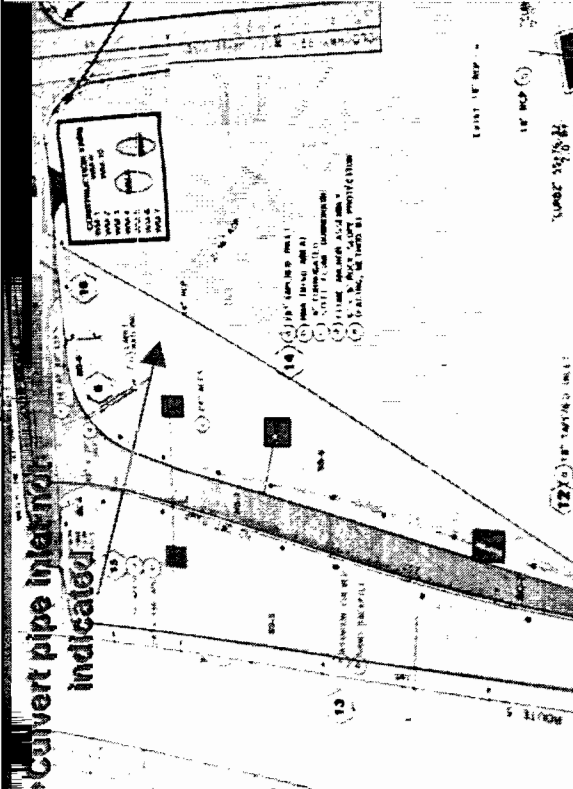
Site Photographs		Caltrans MS4 (SWRCB Order No. 99-06-DWQ) South Avenue On-Ramp Project Caltrans District 2	Photograph date: 10/13/2009
 <p>Discharge point via culvert pipe inlet to Birch Creek</p>	 <p>Photograph 10 – Inappropriate BMP selection (e.g., silt fence implemented in area of concentrated flow) and discharge of sediment laden runoff</p>		
 <p>Photograph 11— Collapsed silt fence BMP and discharge of sediment laden runoff</p>	 <p>Photograph 12 – View of outlet pipe from Photograph 11 leading to Birch Creek</p>		



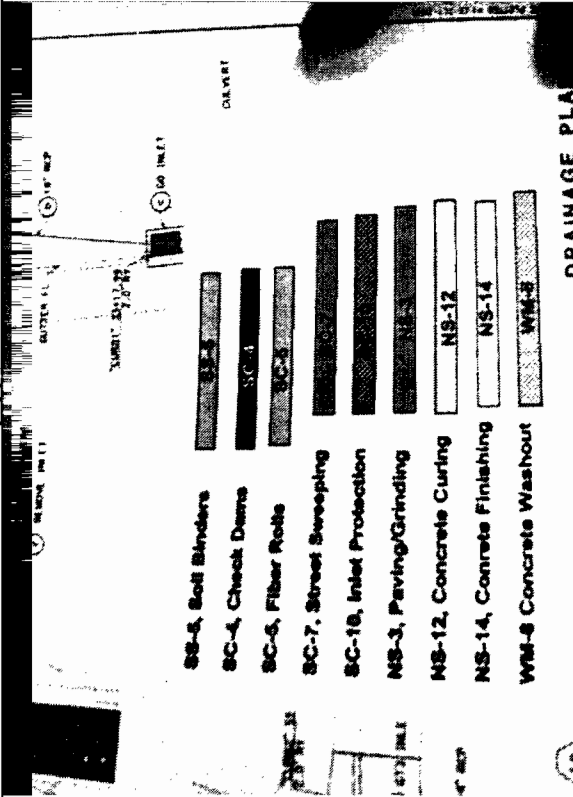
Photograph 13—Evidence of the discharge of sediment leading to Birch Creek



Photograph 14 – Evidence of the discharge of sediment leading to Birch Creek



Photograph 15—Photograph of SWPPP site map



Photograph 16 – SWPPP site map legend indicating soil binder BMPs and fiber roll BMPs by color.

Site Visit No. 3

Fountain Curve Rehabilitation Project
Site Visit Date: 10/14/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Fountain Curve Project
EA No. 020E8914**

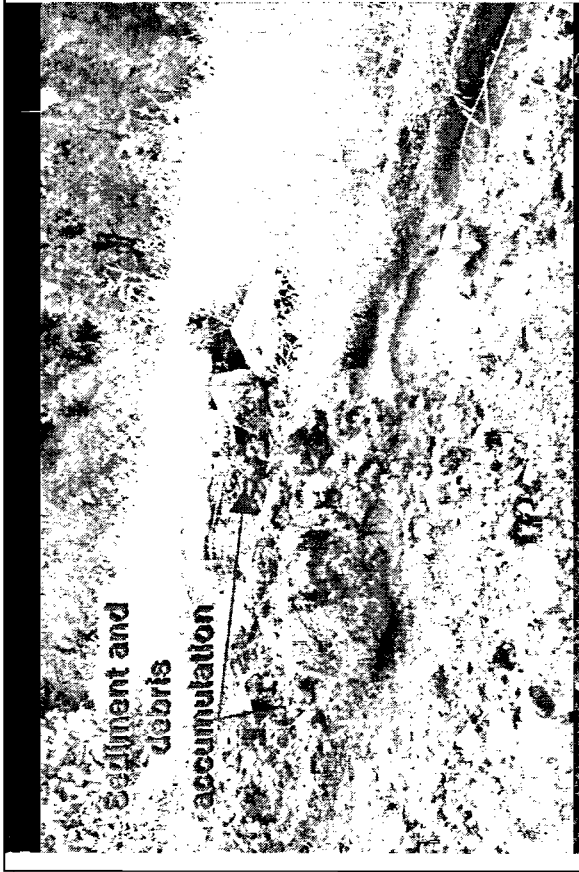
The EPA Audit Team conducted a site visit at the Fountain Curve Project located along Highway 299 West of Buzzard Roost Road near Round Mountain. Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that "program must include requirements of structural and nonstructural BMPs." Appendix D of the SWMP contains the "Statewide Storm Water Quality Practice Guidelines" which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for unstabilized areas associated with the construction of a sound wall, roadway rehabilitation and highway planting.

Specifically, BMPs were not adequately implemented and maintained along the perimeter of the disturbed area associated with the former construction site staging area. The Audit Team observed a visible flow path and erosion causing sediment and debris accumulation to surpass the straw wattles utilized along the southern perimeter of the former staging area (see Photograph 1). Erosion had caused the discharge of sediment and debris from several portions of the roadway drainage area adjacent to the sound wall into a storm drain inlet located along the west side of the highway shoulder (see Photographs 2, 3, and 4).

In addition, BMPs were not adequately implemented on the disturbed slope along the south side of the sound wall to prevent sediment discharge (see Photographs 5 and 6). Furthermore, sediment accumulation was observed along the flow path of a rock lined drainage swale leading to a down-gradient drainage pipe (see Photographs 7 and 8). The straw wattles utilized at the down-gradient drainage pipe inlet were not adequately maintained.

This project was deemed complete by the Caltrans Resident Engineer and Construction Engineer on September 12, 2009, and control of the project had been transferred to Caltrans Maintenance.

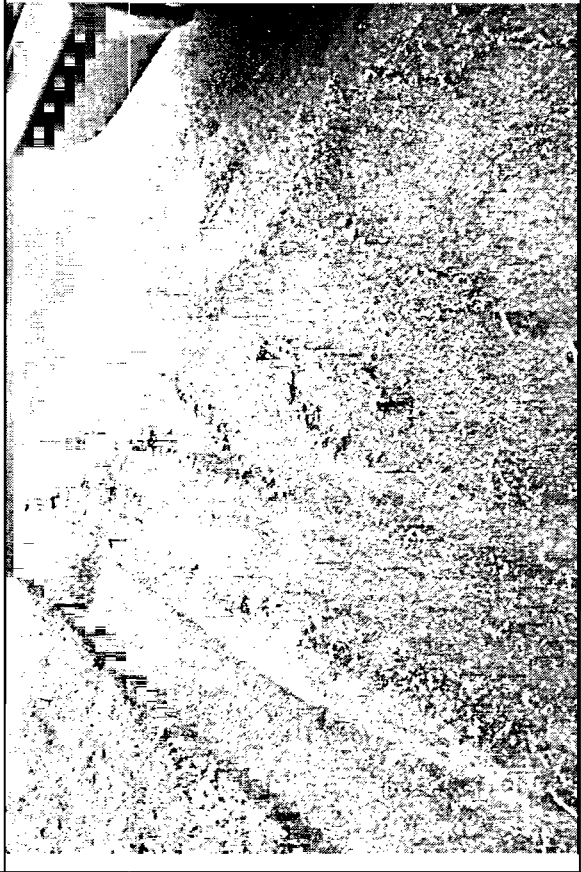
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Fountain Curve Project EA No. 020E8914</p>	<p>Photograph date: 10/14/2009</p>
--------------------------------	--	------------------------------------



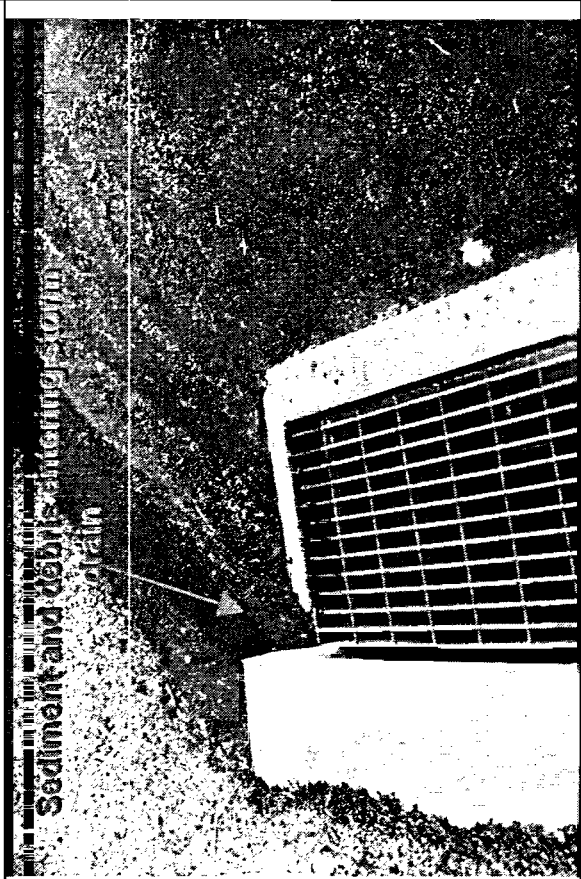
Photograph 1 – Perimeter control failure at the former staging area



Photograph 2 – Run-off causing erosion along the highway shoulder



Photograph 3 – Sediment and debris from Photograph 2

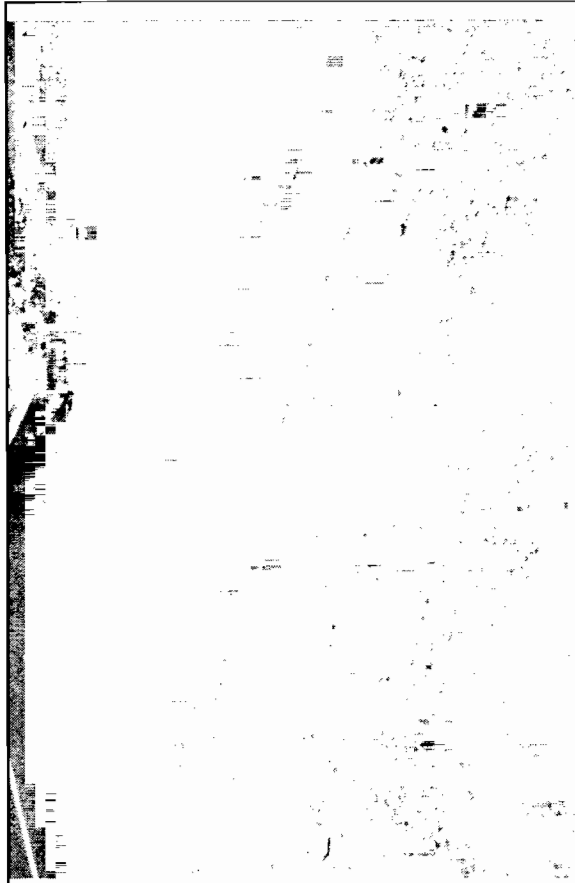


Photograph 4 – Storm drain located on the west side of Highway 299

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Fountain Curve Project EA No. 020E8914</p>	<p>Photograph date: 10/14/2009</p>
--------------------------------	--	------------------------------------



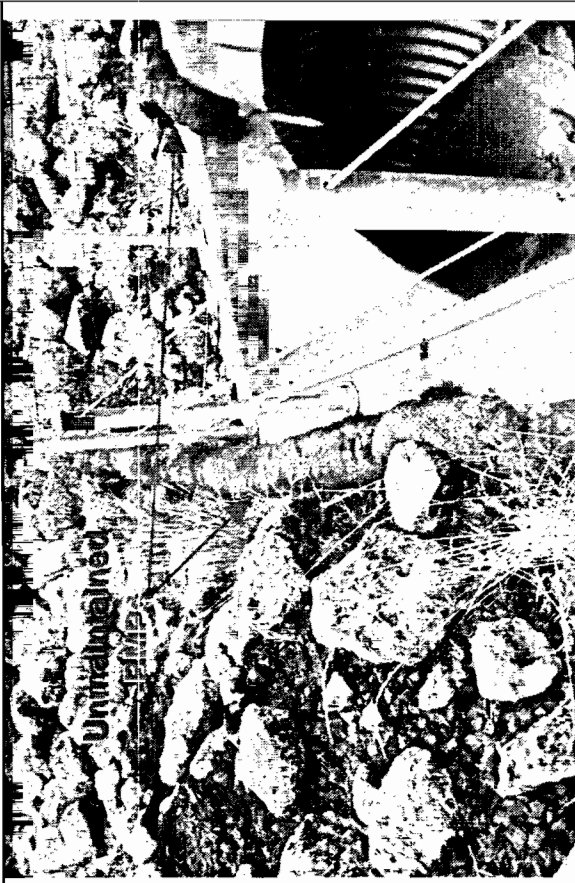
Photograph 5 – Lack of adequate BMPs to prevent discharge of sediment to the roadway



Photograph 6 – Sediment discharge along the highway from Photograph 5



Photograph 7 – Sediment accumulation at down-gradient drainage pipe Inlet



Photograph 8 – Inadequate straw wattle BMP maintenance at drainage pipe Inlet

Site Visit No. 4

Salyer Roadway Realignment Construction Project Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Salyer Roadway Construction Project
Caltrans District 2**

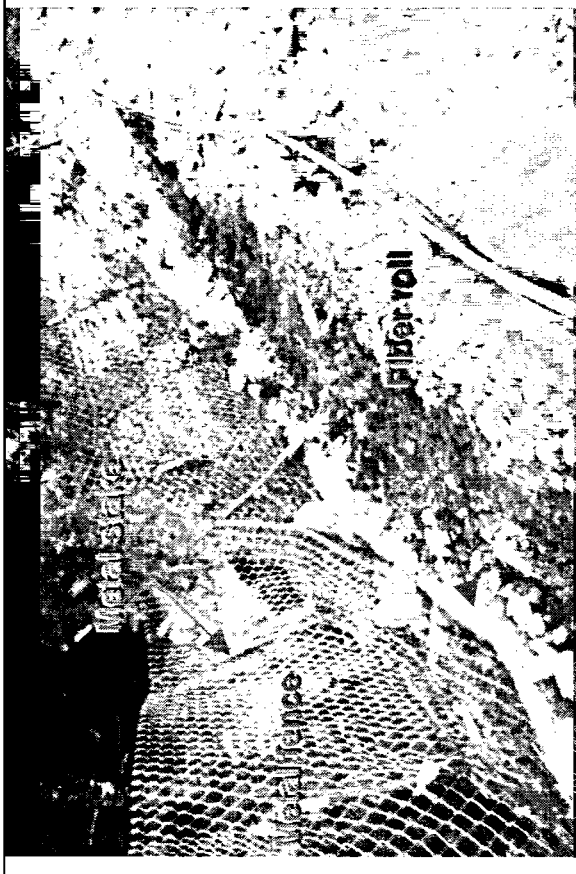
The EPA Audit Team conducted a site visit to the Salyer Roadway Construction Project located at post mile 2.2–2.5 on Highway 299 in Trinity County, CA. The project was located along steep slopes about 500 feet to the southeast of the Trinity River which is a 303d listed water body for sedimentation.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs. Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for several disturbed areas associated with the construction project or for managing the disposal of construction materials at the construction site.

Reinforced straw wattle BMPs consisting of metal fencing, metal stakes, and fiber rolls had been installed on the steep slopes down-gradient of the disturbed areas associated with the construction of a retaining wall (see Photographs 1 and 2). The fiber rolls, however, were not properly staked or entrenched into the ground or adequately maintained to prevent the discharge of sediment (see Photographs 3, 4 and 5). Furthermore, the metal fencing adjacent to the fiber rolls had collapsed in several areas and it appeared that sediment and rock debris had been discharged beyond the extent of the perimeter control BMPs (see Photograph 6). In an area toward the eastern end of the project, straw wattle BMPs had been visibly undercut and evidence of erosion was observed beyond the perimeter control BMPs (see Photographs 7 and 8). As a result, there was a potential for the discharge of sediment off-site to the west and subsequently to the Trinity River.

Adequate BMPs were not implemented at the construction site for good housekeeping to properly manage the disposal of concrete waste. Specifically, concrete waste was observed on the ground surface near the edge of a steep slope toward the western end of the project (see Photograph 9) and adjacent to what appeared to be a dedicated concrete waste container in the staging area near the eastern end of the project (see Photographs 10 and 11). In addition, a material stockpile was observed in the staging area that did not have BMPs for coverage or containment (see Photograph 12). Furthermore, the straw wattle BMPs implemented in the staging area were not staked or entrenched into the ground to retain pollutants and prevent failure (see Photographs 10, 11 and 12). The Resident Engineer explained that he had approved the use of straw wattle BMPs at the site that were not staked or entrenched into the ground; however, the SWPPP had not yet been amended to include this alternative installation method for straw wattle BMPs.

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Salyer Roadway Construction Project Caltrans District 2</p>	<p>Photograph date: 10/22/2009</p>
--------------------------------	---	------------------------------------



Photograph 1 – Example of reinforced straw wattle BMP



Photograph 3 – Example of fiber roll not entrenched or staked into the ground



Photograph 2 – Example of straw wattle BMP implemented down-gradient of disturbance and retaining wall construction

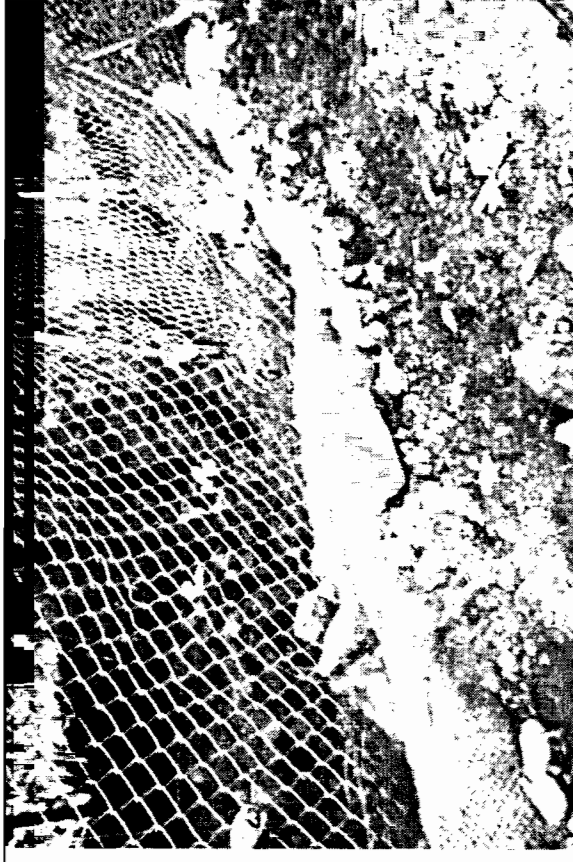


Photograph 4 – Close-up view of fiber roll not entrenched or staked into the ground

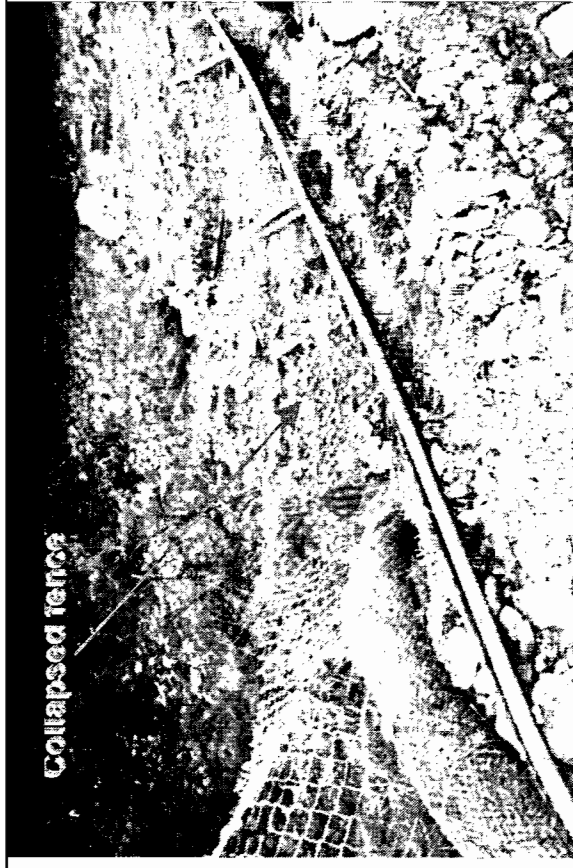
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Salyer Roadway Construction Project
Caltrans District 2

Photograph date: 10/22/2009



Photograph 5— Example of sediment and debris accumulation against straw wattle BMP




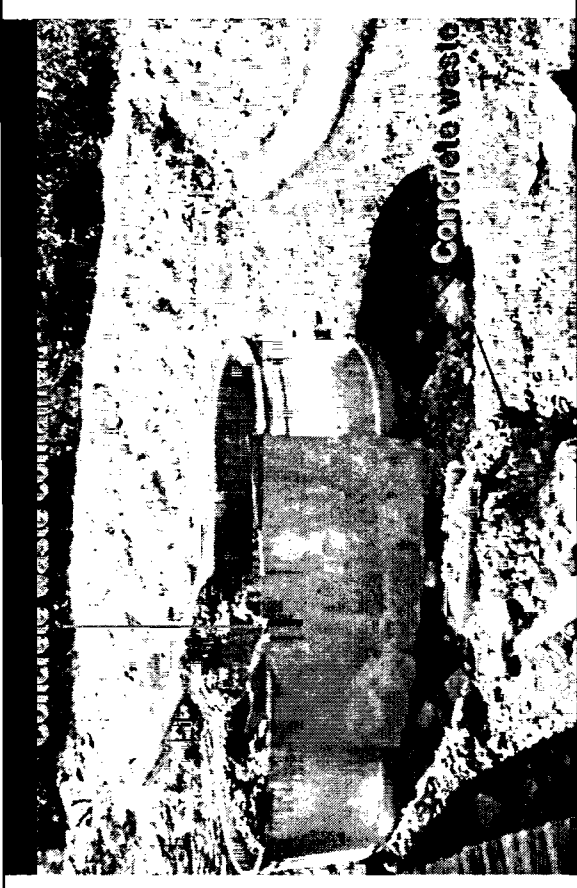

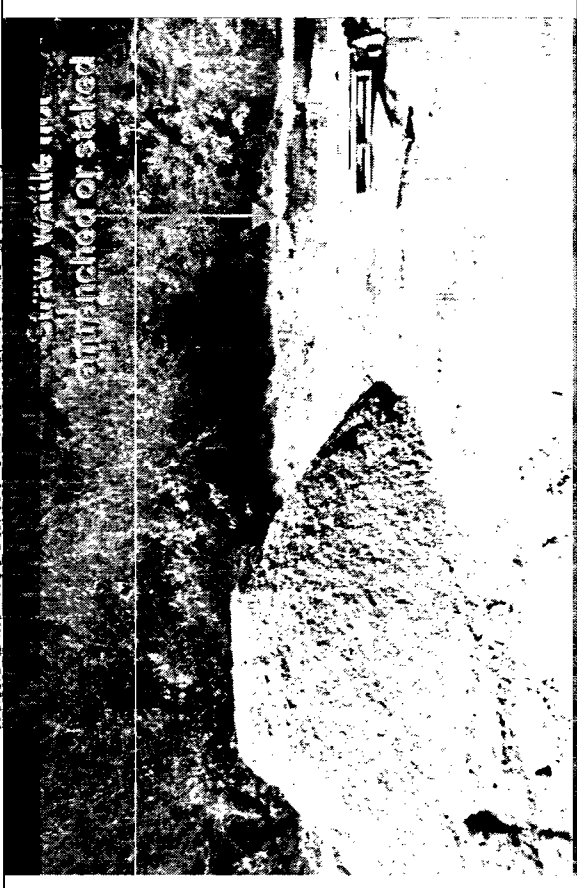
Photograph 6 – Example of collapsed section of metal fence



Photograph 7— Undercut section of straw wattle BMP and evidence of erosion



Photograph 8 – Closer view of straw wattle and erosion pictured in Photograph 7

<div>Site Photographs</div> <div> <div>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Salyer Roadway Construction Project Caltrans District 2</div> <div>Photograph date: 10/22/2009</div> </div>	
	 <div> Photograph 10— Concrete waste and container in staging area (Note: Straw wattle BMP not staked or entrenched into ground) </div>
	 <div> Photograph 12— Stockpile in staging area without BMPs for containment or coverage </div>
<div> Photograph 11— Concrete waste near concrete waste container in staging area (Note: Straw wattle BMP not staked or entrenched into ground) </div>	

Site Visit No. 5

Nicolaus Bypass Project
Site Visit Date: 10/7/2009



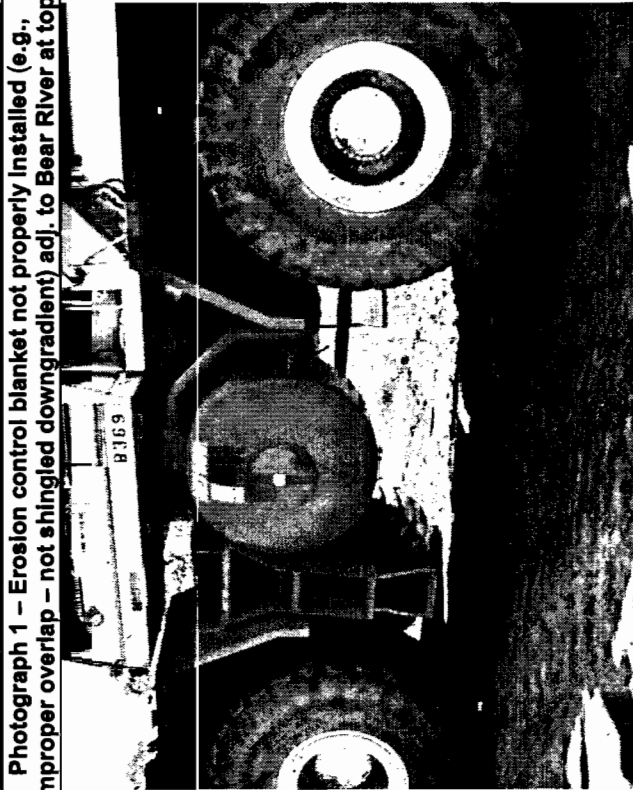
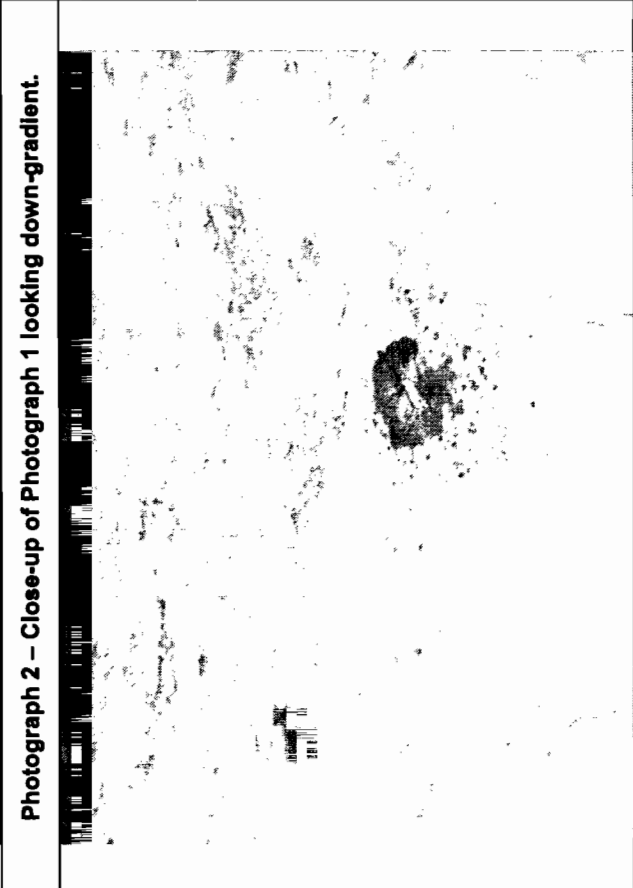
**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Nicolaus Bypass Project
Caltrans District 3**

The EPA Audit Team conducted a site visit at the Nicolaus Bypass project located on Highway 70 from the intersection with Feather River Boulevard to approximately Rio Osa Road in Yuba and Sutter Counties, CA. The project consisted of a roadway construction including new bridges, overpasses, and associated roadway drainage swales and medians.

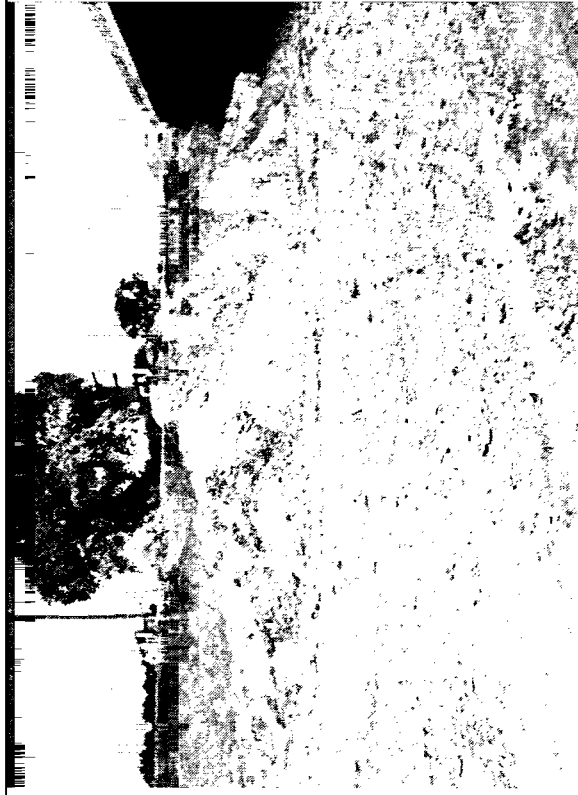



Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that "program must include requirements of structural and nonstructural BMPs." Appendix D of the SWMP contains the "Statewide Storm Water Quality Practice Guidelines" which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for vehicle tracking control at the construction site entrances and contractor parking area off Feather River Boulevard. Although gravel had been placed at the construction site entrances, the gravel was too small to be effective, sediment was visible in the rock pad, and the rock had become sparse and compacted in areas (see Photographs 10, 11, and 16). In addition, no vehicle tracking controls had been implemented for the area of disturbance associated with the contractor parking area (see Photographs 12 and 13). As a result, there was sediment transported to Feather River Boulevard (see Photographs 10 through 16).

Adequate BMPs were not implemented to prevent the discharge of sediment from disturbed slope areas adjacent to Yankee Slough waterway. Specifically, BMPs had not been implemented for disturbed slope areas adjacent to Yankee Slough (see Photographs 19 and 20), and silt fence BMPs implemented at the toe of the disturbed slope adjacent to Yankee Slough had collapsed and were no longer effective at preventing the discharge of sediment to Yankee Slough (see Photographs 21 through 24). As a result, there was a potential for the discharge of sediment from the disturbed slope areas adjacent to Yankee Slough waterway.

Note: Additional site conditions and inadequate structural and non-structural controls are shown in the attached site photographs log.

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3	Photograph date: 10/7/2009
		<p>Photograph 2 – Close-up of Photograph 1 looking down-gradient.</p>
		<p>Photograph 4 – Close-up view of petroleum product on ground surface</p>
<p>Photograph 3 – Equipment with petroleum product leaking onto ground surface (see Photograph 4 for close-up view).</p>		




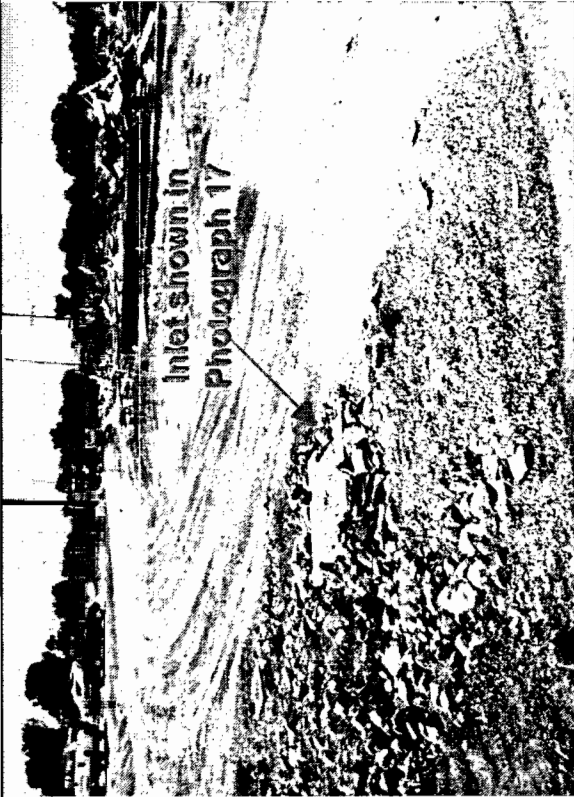
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	---	-----------------------------------

		<p>Photograph 5 – Soil stockpile with no perimeter controls or temporary stabilization located just upgradient of Bear River crossing.</p>	<p>Photograph 6 – Drainage outlet below unstabilized embankment slope adjacent to the highway.</p>
		<p>Photograph 7 – Drainage outlet at base of unstabilized slope shown in Photograph 6.</p>	<p>Photograph 8 – Uncontrolled/uncontained concrete waste</p>

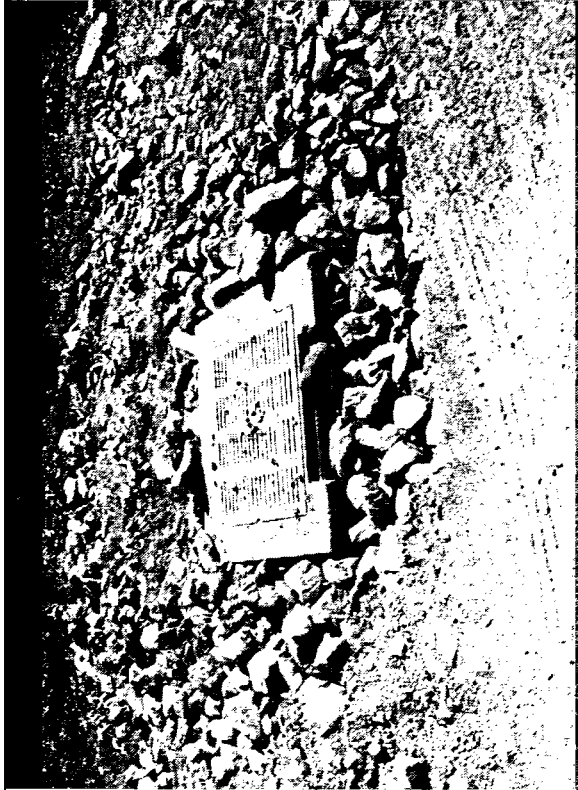


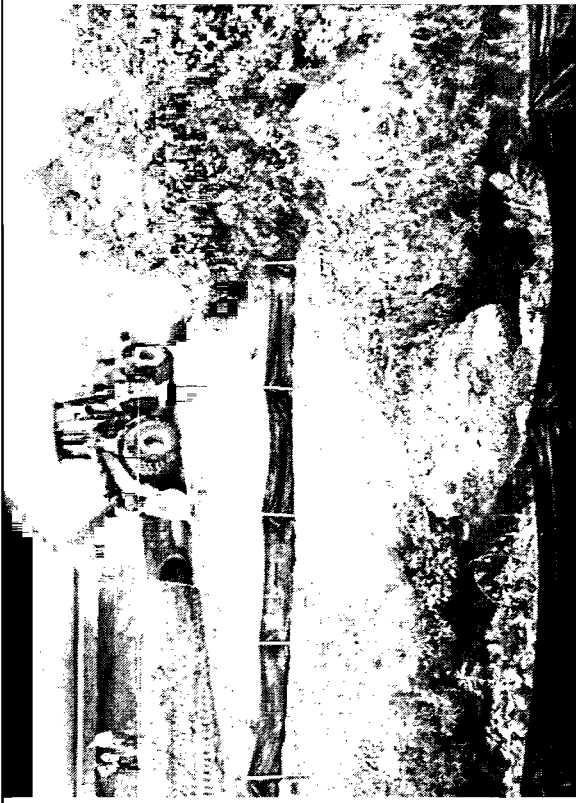
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	---	-----------------------------------

		<p>Photograph 9 – Uncontrolled/uncontained concrete waste</p>	<p>Photograph 10 – Tracking control BMPs not adequately maintained (e.g., sediment in rock pad and rock sparse in areas)</p>
		<p>Photograph 11 – Tracking control BMPs not adequately maintained (e.g., sediment in rock pad and rock sparse in areas)</p>	<p>Photograph 12 – Tracking control BMPs not implemented for disturbed area of contractor parking. Observed sediment transport to roadway</p>

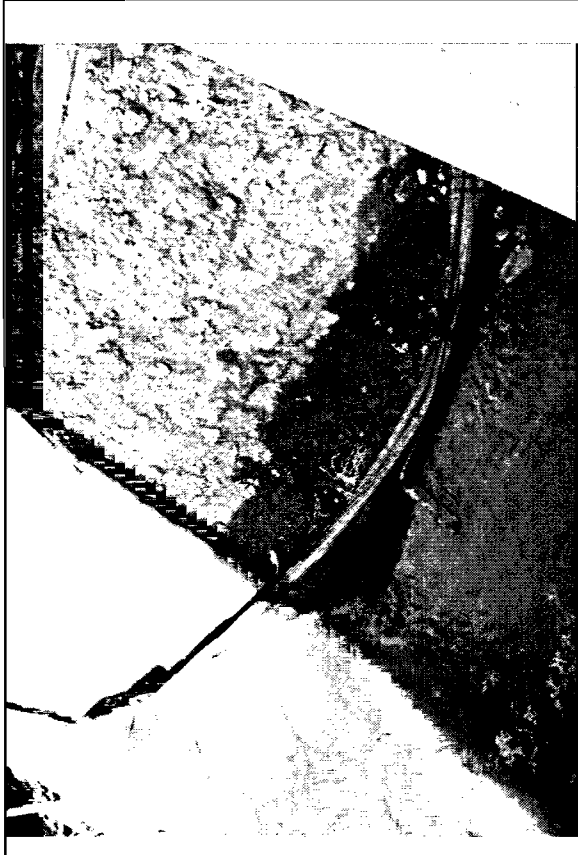

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3	Photograph date: 10/7/2009
-------------------------	--	----------------------------

	
<p>Photograph 13 – Sediment transport from areas of disturbance onto Feather River Boulevard, a public roadway.</p>	<p>Photograph 14 – Sediment transport from areas of disturbance onto Feather River Boulevard, a public roadway.</p>
	
<p>Photograph 15 – Sediment transport from areas of disturbance onto Feather River Boulevard, a public roadway.</p>	<p>Photographs 16 – Adequate inlet protection and vehicle tracking control BMPs had not been implemented adj. to entrance off Feather River Blvd.</p>




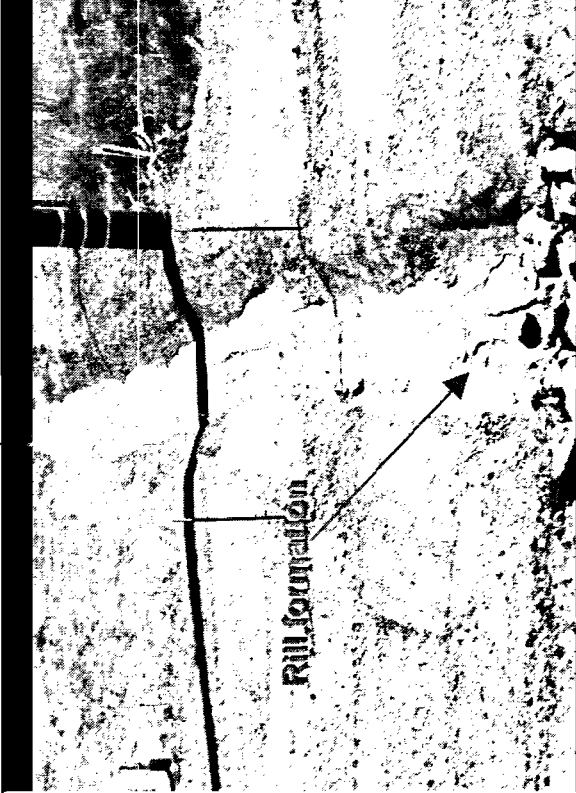
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	---	-----------------------------------

	
<p>Photograph 17 – Close-up of Photograph 16. Adequate inlet protection had not been implemented.</p>	<p>Photograph 18 – Inadequate materials handling and storage</p>
	
<p>Photograph 19 – Unstabilized slope area adjacent to Yankee Slough</p>	<p>Photograph 20 – Differing vantage point for Photograph 19</p>

<h1>Site Photographs</h1>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
---------------------------	---	-----------------------------------

	<p>Photograph 21 – Silt Fence BMP not properly maintained (e.g., collapsed) adjacent to Yankee Slough. Note area of disturbance up-gradient.</p>
	<p>Photograph 22 – Close-up view of Photograph 21.</p>
	<p>Photograph 23 – Silt Fence collapsed in areas and not properly maintained. Note large unstabilized slope area upgradient.</p>
	<p>Photograph 24 – Silt Fence not properly entrenched to retain sediment adjacent to Yankee Slough waterway</p>

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Nicolaus Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	---	-----------------------------------

	
<p>Photograph 25 – SF not adequately implemented for all land disturbing activities to prevent the discharge of sediment to Yankee Slough</p>	<p>Photograph 26 – Large expanse of disturbed slope area with only rock and no perimeter BMPs.</p>
	
<p>Photograph 27 – Slope drainage channel which drains to Irrigation channel</p>	<p>Photograph 28 –Previous erosion and sediment accumulation draining to Irrigation channel. Flow dissipators do not extend entire length.</p>

Site Visit No. 6

Lincoln Bypass Project
Site Visit Date: 10/7/2009

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lincoln Bypass Project
Caltrans District 3

The EPA Audit Team conducted a site visit at the Lincoln Bypass project located west of the intersection of Twelve Bridges Drive and SR-65 north to Nicolaus Road in Placer County, CA. The project consisted of linear roadway construction including new bridges, overpasses, and associated roadway drainage swales and medians.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that "program must include requirements of structural and nonstructural BMPs." Appendix D of the SWMP contains the "Statewide Storm Water Quality Practice Guidelines" which provide a description of each approved BMP for statewide application. BMPs were not adequately selected, installed or maintained to prevent the discharge of sediment to the South Ingram Slough waterway. Unconsolidated material was observed being placed between the toe of the slope and the silt fence/straw bale BMPs used as perimeter control along the waterway (see Photographs 3 and 4). Moreover, no BMPs were implemented to control concentrated flow off of the plastic erosion control application and across the unconsolidated material at the toe of the slope (see Photographs 3 and 4). As a result, there was a potential for BMP failure and the discharge of sediment from up-gradient areas of disturbance to the South Ingram Slough waterway.

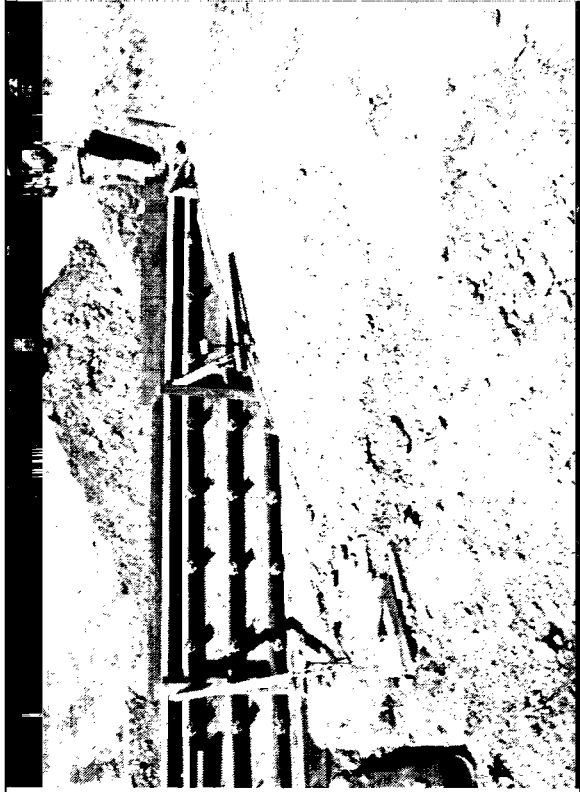

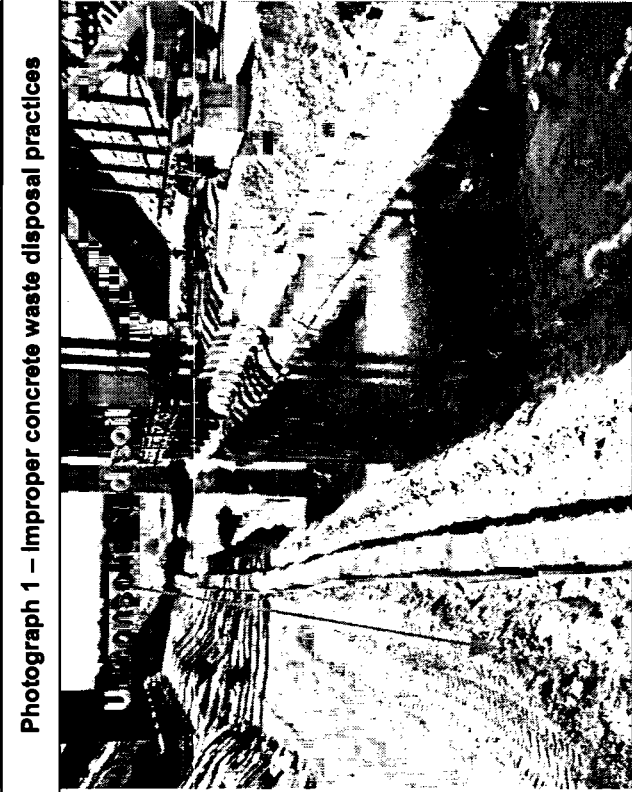
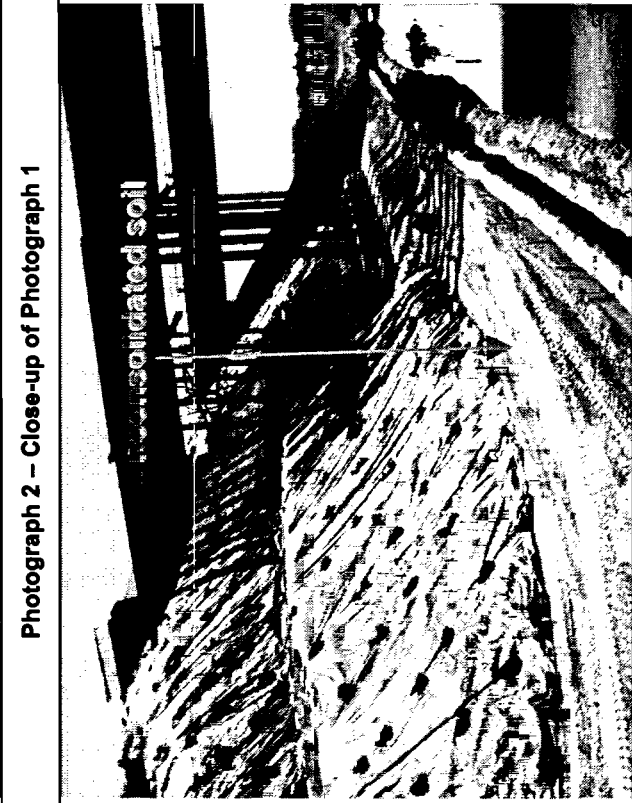
Adequate structural and non-structural BMPs were not implemented in the drainage swale conveyance channels located up-gradient of South Ingram Slough (see Photograph 8) and Auburn Ravine (see Photograph 17). BMPs had not been implemented to prevent erosion from run-on to the swale slopes, and concentrated flow along the bottom of the swale. As a result, there was a potential for erosion and subsequent discharge from these drainage swale conveyance channels to South Ingram Slough and Auburn Ravine, respectively.

In addition, BMPs were not implemented to prevent the discharge of sediment from a soil stockpile located near the bridge crossing over North Ingram Slough (see Photograph 9). BMPs were not implemented to control water run-on to the stockpile slope, or to control water run-off from the stockpile, and no perimeter BMPs were implemented (see Photograph 9). As a result, there was a potential for the discharge of sediment to North Ingram Slough.

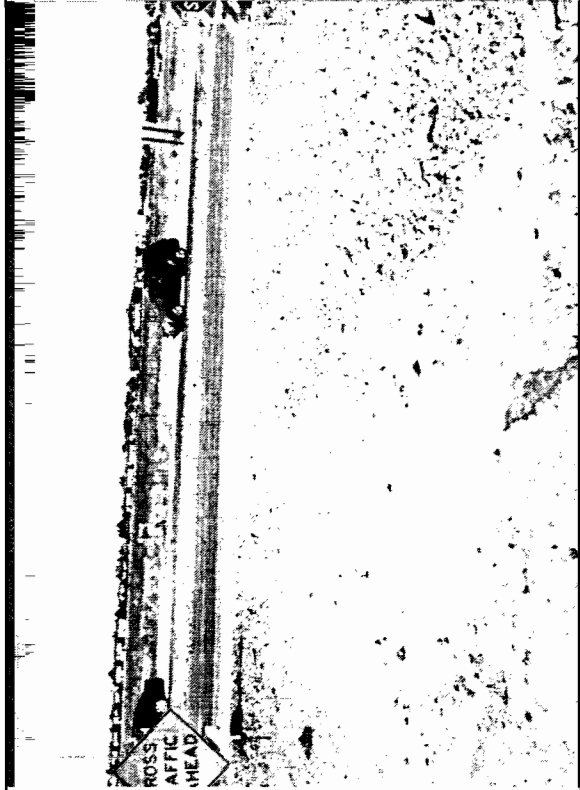
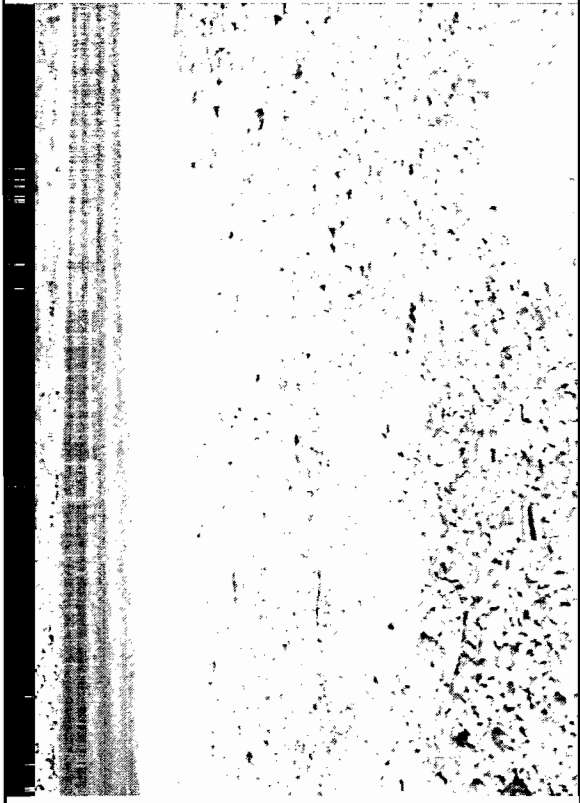
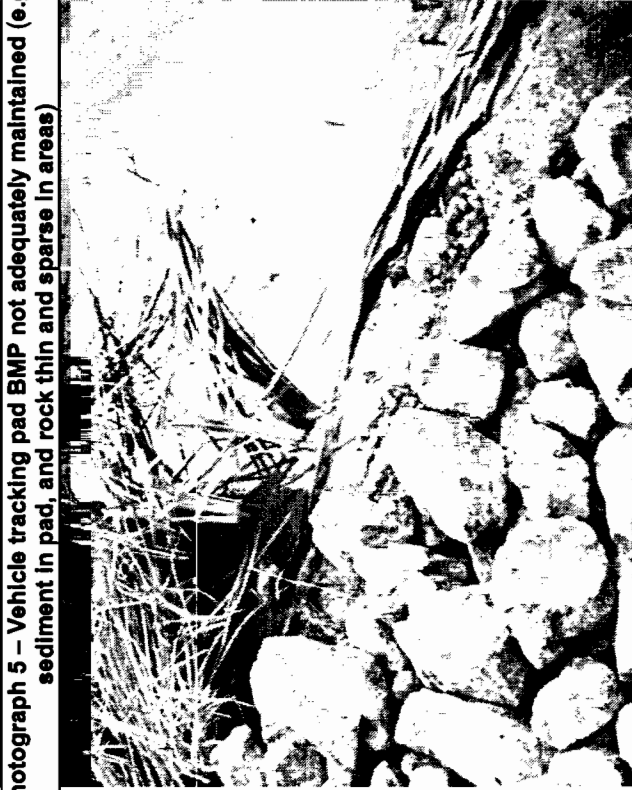
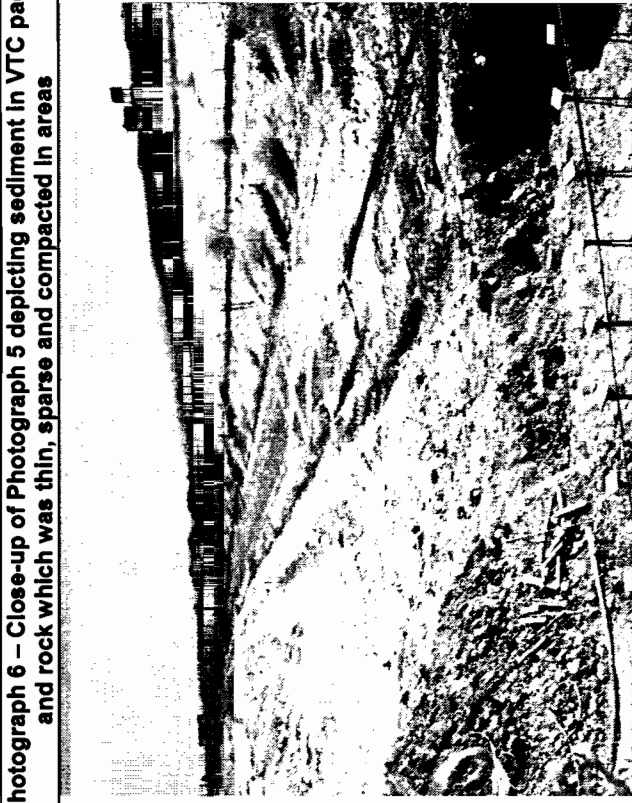
Furthermore, BMPs were not adequately installed and maintained to prevent the discharge of sediment to Auburn Ravine. Specifically, silt fence BMPs implemented below up-gradient areas of disturbance and adjacent to Auburn Ravine were installed backwards (e.g., fabric on down-gradient side of stakes) (see Photograph 10), were not properly entrenched to retain sediment (see attached Photograph 11), and had not been properly maintained (e.g., collapsed in areas, soil placement over ½ the effective height) (see Photographs 11 through 15). As a result, there was a potential for the discharge of sediment from up-gradient areas of disturbance to Auburn Ravine.

Note: Additional site conditions and inadequate structural and non-structural controls are shown in the attached site photographs log.

<h1>Site Photographs</h1>	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Lincoln Bypass Project Caltrans District 3	Photograph date: 10/7/2009
---------------------------	---	----------------------------

	
	
<p>Photograph 3 – Unconsolidated soil placed between the toe of the slope and the perimeter control BMPs along the waterway</p>	<p>Photograph 4 – No BMPs to control concentrated flow off of the plastic and across the unconsolidated material at the toe of the slope</p>

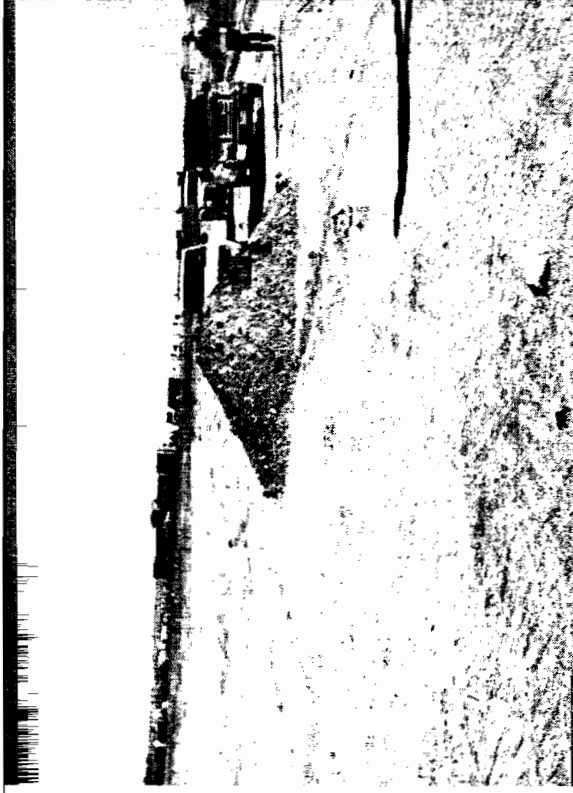
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Lincoln Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	--	-----------------------------------

 <p>Photograph 5 – Vehicle tracking pad BMP not adequately maintained (e.g., sediment in pad, and rock thin and sparse in areas)</p>	 <p>Photograph 6 – Close-up of Photograph 5 depicting sediment in VTC pad, and rock which was thin, sparse and compacted in areas</p>
 <p>Photograph 7 – Badly deteriorated silt fence BMP located in/adjacent to North Ingram Slough</p>	 <p>Photograph 8 – Disturbed conveyance channel with no slope run-on BMPs or erosion and sediment control BMPs near the S. Ingram Slough.</p>

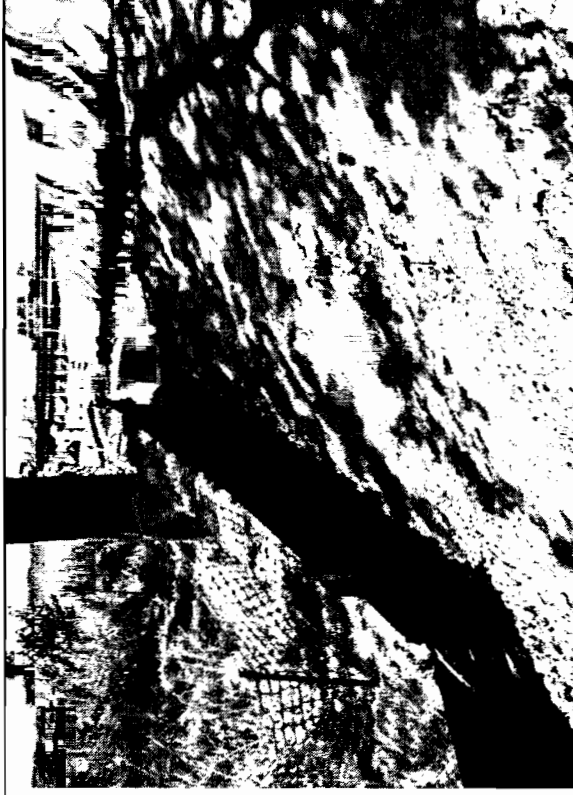
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lincoln Bypass Project
Caltrans District 3

Photograph date: 10/7/2009



Photograph 9 – No BMPs Implemented for stockpile management near the North Ingram Slough bridge crossing



Photograph 10 – Silt fence BMP's Installed backwards (e.g., stakes on the upgradient side of the fabric)


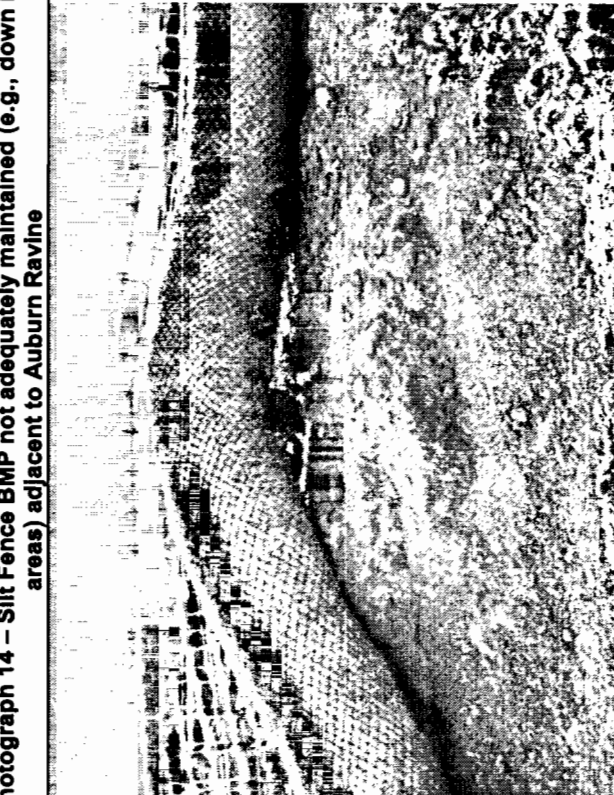

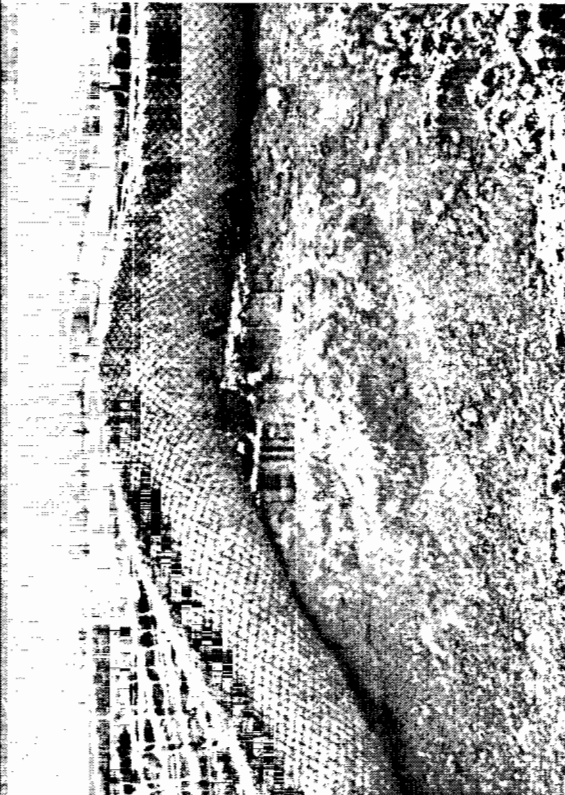


Photograph 11 – Silt Fence BMPs not properly installed (e.g., not entrenched) or maintained (e.g., collapsed) adjacent to Auburn Ravine



Photograph 12 – Silt Fence BMP not adequately maintained (e.g., down in areas; deteriorated) adjacent to Auburn Ravine

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Lincoln Bypass Project Caltrans District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	--	-----------------------------------

	<p>Photograph 13 – Differing vantage point from Photograph 12 depicting unmaintained Silt Fence BMP adjacent to Auburn Ravine</p>
	<p>Photograph 14 – Silt Fence BMP not adequately maintained (e.g., down in areas) adjacent to Auburn Ravine</p>
	<p>Photograph 15 – SF BMP not adequately maintained (e.g., sediment placement over 1/2 the effective height) adjacent to Auburn Ravine</p>
	<p>Photographs 16 – Straw wattle BMP not properly installed (e.g., not entrenched) up-gradient of Auburn Ravine</p>

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lincoln Bypass Project
Caltrans District 3

Photograph date: 10/7/2009



Photograph 17 – Upgradient areas of disturbance associated with pollution prevention BMP unstabilized. Drains to Auburn Ravine.



Photograph 18 – Disturbed slope area adjacent to pollution prevention BMP outlet pipes adjacent to Auburn Ravine.

Site Visit No. 7

Top of Buckhorn Project
Site Visit Date: 10/14/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Top of Buckhorn Project
Caltrans District 2**

The EPA Audit Team conducted a site visit at the Top of Buckhorn project located approximately 25 miles west of Redding, CA on State Highway 299 near the intersection of Hoadley Peaks roadway in Shasta County. The project consisted of a roadway realignment of State Highway 299. No construction equipment or materials were observed, and it appeared that construction had been completed.

The site visit conducted on October 14, 2009 coincided with a precipitation event on October 13 and 14, 2009 which produced heavy rains. Precipitation data obtained from the California Data Exchange Center (CDEC) Grass Valley Creek Station, located approximately 2 miles southwest of the Top of Buckhorn project, indicated that rain began falling at approximately 8 p.m. on October 12, 2009 and lasted through 3 p.m., October 14, 2009. The total accumulation during the 24 hour period from 8 PM on October 12, 2009 through 8 PM on October 13, 2009 was 5.47 inches of rainfall, and the accumulation during the 19 hour period from 8 PM on October 13, 2009 through 3 PM on October 14, 2009 was 0.43 inches of rainfall. Site conditions observed on October 14, 2009 are summarized below.

Prohibition A.1 of the Permit states the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.” Adequate BMPs were not implemented to prevent the discharge of sediment from up-gradient areas of disturbance to an unnamed tributary of Crystal Creek.

Specifically, adequate BMPs were not implemented to prevent the discharge of sediment from the field constructed sediment basins (see Photograph 9) and from disturbed slope areas adjacent to State Highway 299 (see Photographs 1 and 2). Visible evidence of a runoff event discharging sediment to the field constructed sediment basin No. 2 (see Photographs 2 and 3) and beyond the basin to the unnamed tributary of Crystal Creek (see Photographs 4 through 8) was observed. Visible evidence of a runoff event discharging sediment to the two field constructed sediment basins and sediment accumulation in the basins was observed during the inspection (see Photographs 9 through 12); and within the outlet conveyance channel (see Photographs 4 and 7) which subsequently drains to the unnamed tributary to Crystal Creek (see Photographs 5, 6 and 8).

In addition to the up-gradient disturbed areas contributing sediment to and beyond the field constructed basins No. 1 and No. 2, adequate BMPs were not implemented below the basin No. 2 rip-rap outlet conveyance channel (see Photograph 6), at the base of the field constructed sediment basin No. 2 outer embankment slope (see Photographs 13 through 15), below field constructed sediment basin No. 1 culvert outlet pipe (see Photograph 16), and on disturbed slope areas adjacent to the rip-rap outlet conveyance channel. It should be noted that the sediment basins were field constructed, as provided by Caltrans District No. 2 representatives, and it was not known whether the basins were designed and constructed according to the Caltrans Pollution Prevention Design Guide (PPDG).

BMPs were not adequately selected, installed or maintained to prevent the discharge of sediment to the unnamed tributary to Crystal Creek. Specifically, the straw wattle BMPs were an

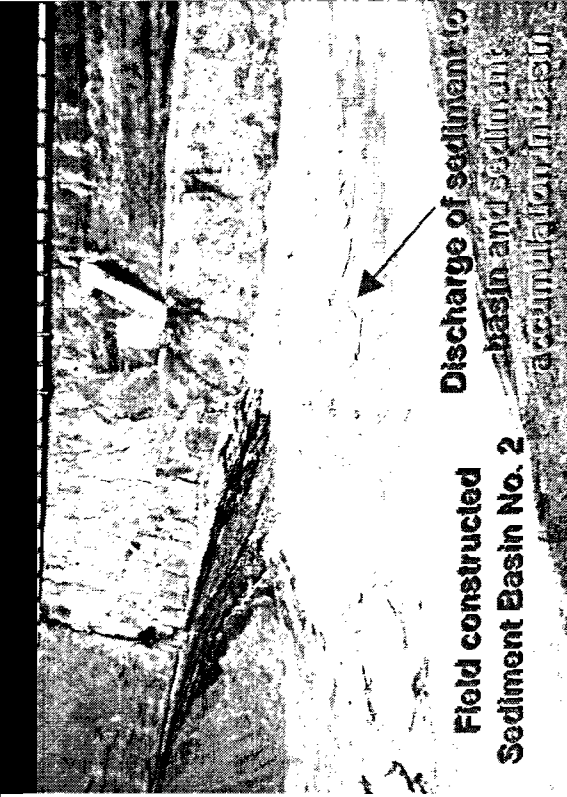
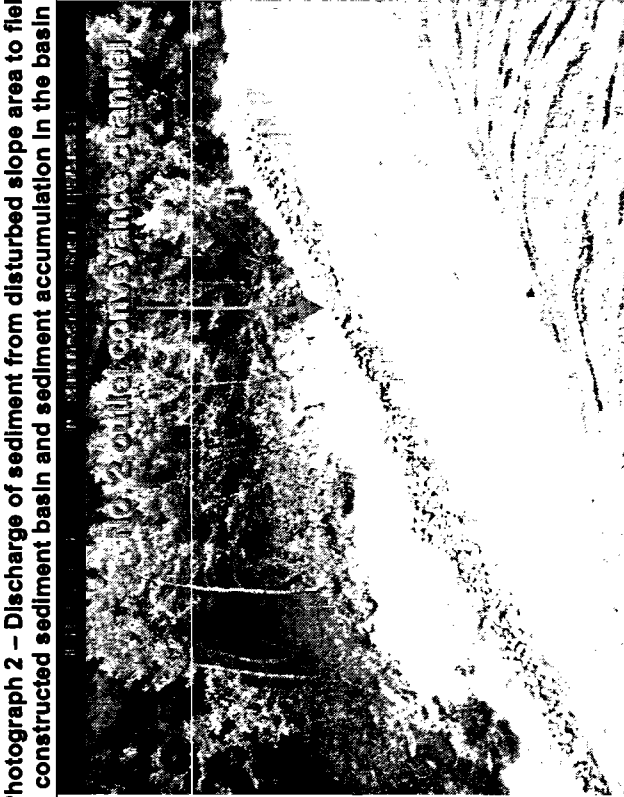


**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Top of Buckhorn Project
Caltrans District 2**

improper BMPs selection for an area of concentrated flow from the field constructed sediment basin No. 2 outlet conveyance channel (see Photographs 6 and 8). The silt fence BMPs implemented below the field constructed sediment basin No. 2 embankment slope were placed under a culvert pipe, had collapsed in areas, and evidence of sediment transport beyond the silt fence BMP to the unnamed tributary was observed (see Photographs 13 through 15). Adequate BMPs had not been implemented for flow dissipation below the field constructed sediment basin No. 1 culvert outlet pipe. Evidence of erosion (e.g., gulley formation) and embankment undercutting was observed (see Photograph 16). Furthermore, BMPs were not implemented for disturbed slope areas adjacent to the rip-rap outlet conveyance channel which drains to the unnamed tributary to Crystal Creek (see Photograph 17). As a result, there was a discharge of sediment to the unnamed tributary which subsequently drains to Crystal Creek. Prohibition A.1 of the Permit states the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.”

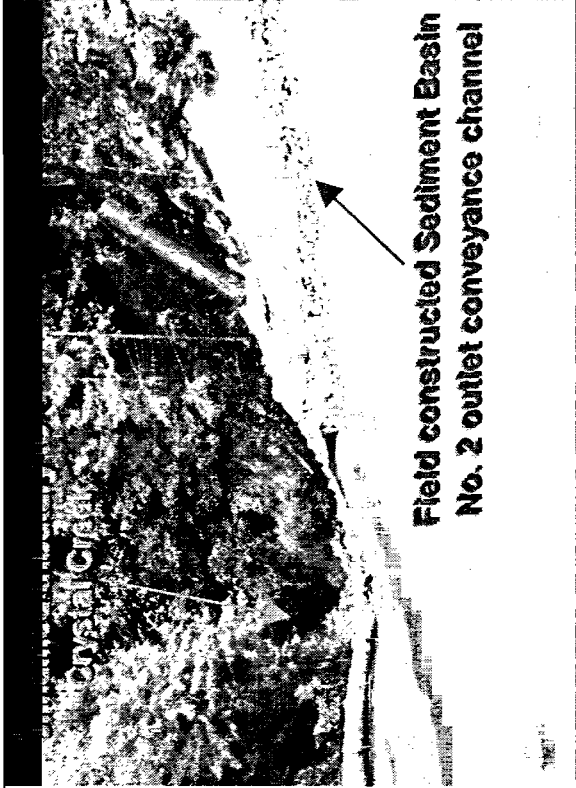



Adequate BMPs were not implemented for disturbed cut slope areas located adjacent to State Highway 299, which ultimately drain offsite via a culvert pipe inlet and drainage pipe leading to unnamed tributary to Crystal Creek. Specifically, adequate structural and non-structural BMPs had not been implemented for the disturbed cut slope areas (see Photograph 18), and evidence of erosion, cut slope failure and sediment transport were observed (see Photographs 18 through 20). As a result, there was evidence of sediment transport from the disturbed cut slope area to the adjacent State Highway 299 drainage swale which drains to the culvert pipe inlet area (see Photograph 20).

BMPs had not been implemented for catch basin inlets located in the flowline of the drainage swale associated with State Highway 299 roadway. Specifically, BMPs were not implemented to prevent the discharge of sediment to the catch basin inlets from up-gradient disturbed cut slope areas (see Photographs 21 and 22). As a result, there was a potential for the discharge of sediment to the catch basin inlet and associated culvert drainage pipe which subsequently drains to the unnamed tributary to Crystal Creek.

<div>Site Photographs</div>	<div>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2</div>	<div>Photograph date: 10/14/2009</div>
-----------------------------	---	--

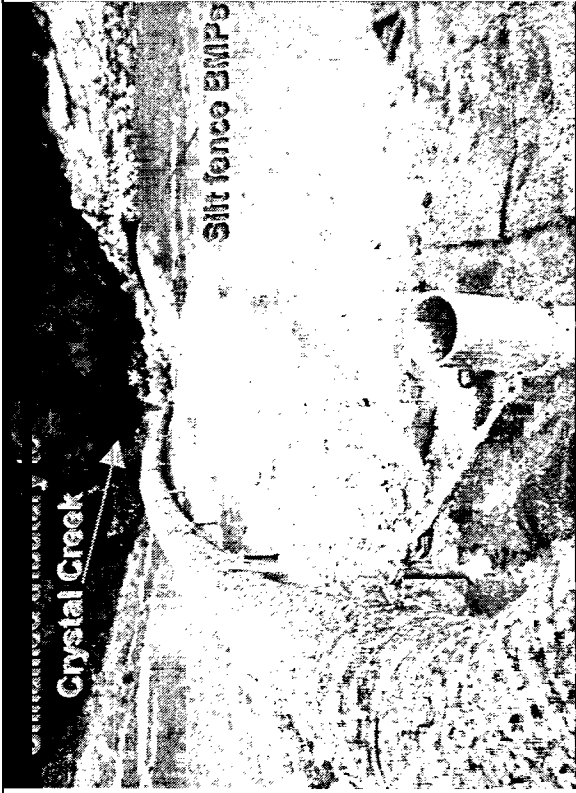

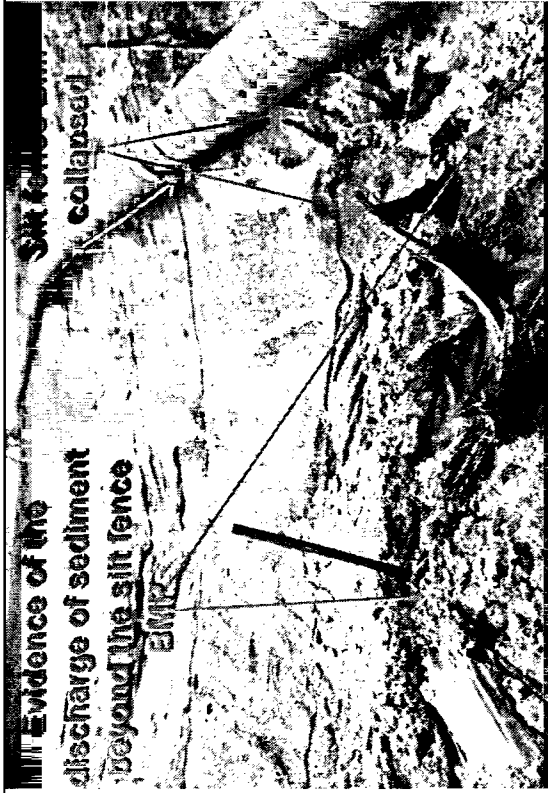

	<div>Photograph 1 – Disturbed slope areas adjacent to State Highway 299 with evidence of erosion (e.g., rill and gully formations)</div>
	<div>Photograph 2 – Discharge of sediment from disturbed slope area to field constructed sediment basin and sediment accumulation in the basin</div>
	<div>Photograph 3 – Sediment basin embankment slope erosion (e.g., rill and gully formation) and sediment accumulation in the basin</div>
	<div>Photograph 4 – Vantage point of the outlet conveyance channel for the field constructed sediment basin No. 2</div>

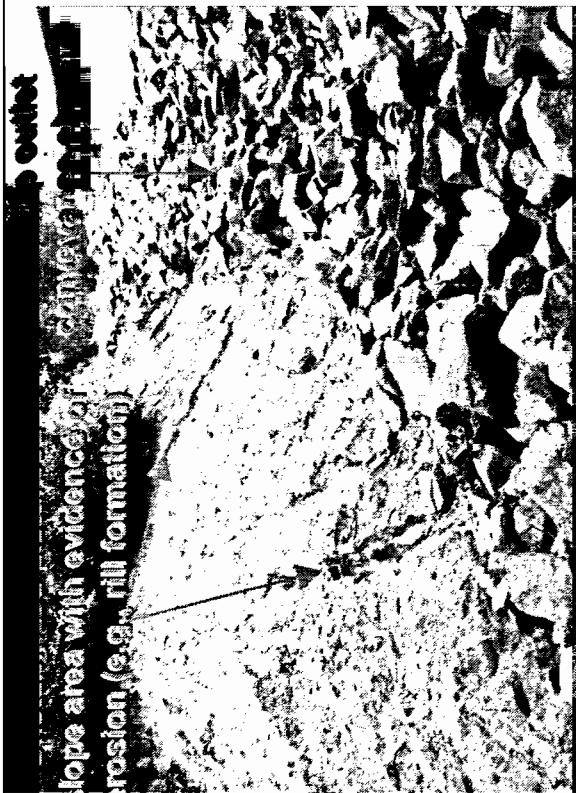
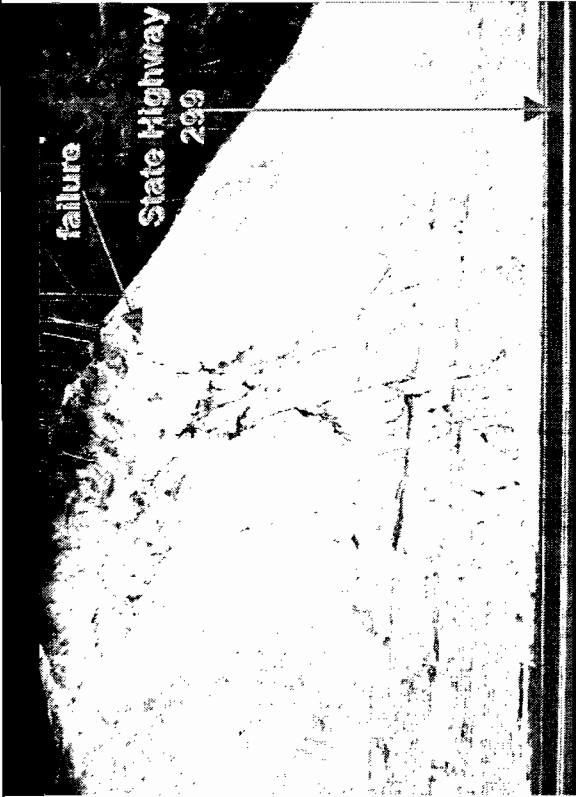
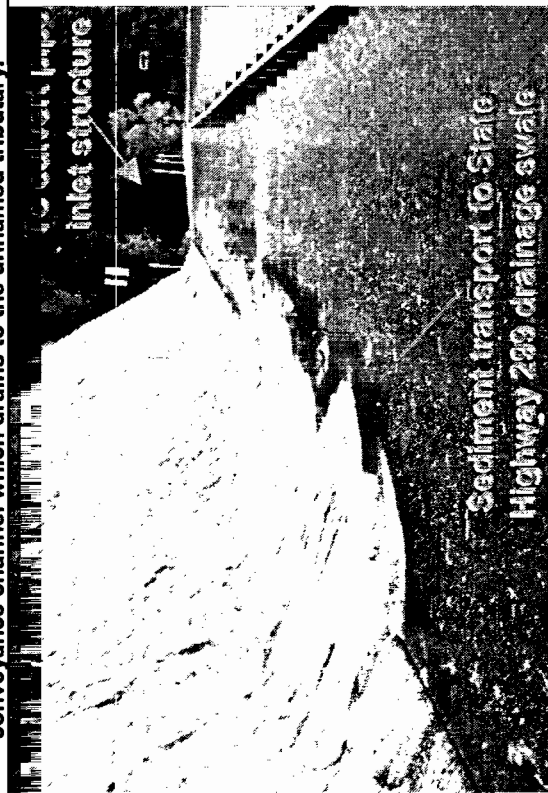

<h1>Site Photographs</h1>	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2	Photograph date: 10/14/2009
---------------------------	--	-----------------------------

 <p>Field constructed Sediment Basin No. 2 outlet conveyance channel</p>	 <p>unnamed tributary to Crystal Creek</p> <p>unnamed tributary to Crystal Creek</p> <p>straw wattle BMPs</p>
 <p>rip-rap conveyance channel</p>	 <p>unnamed tributary to Crystal Creek</p> <p>straw wattle BMPs</p>
<p>Photograph 7—Visible evidence of sediment accumulation in the rip-rap outlet conveyance channel which drains to the unnamed tributary</p>	<p>Photograph 8 – Visible evidence of the discharge of sediment to the unnamed tributary to Crystal Creek, and failed straw wattle BMPs observed</p>


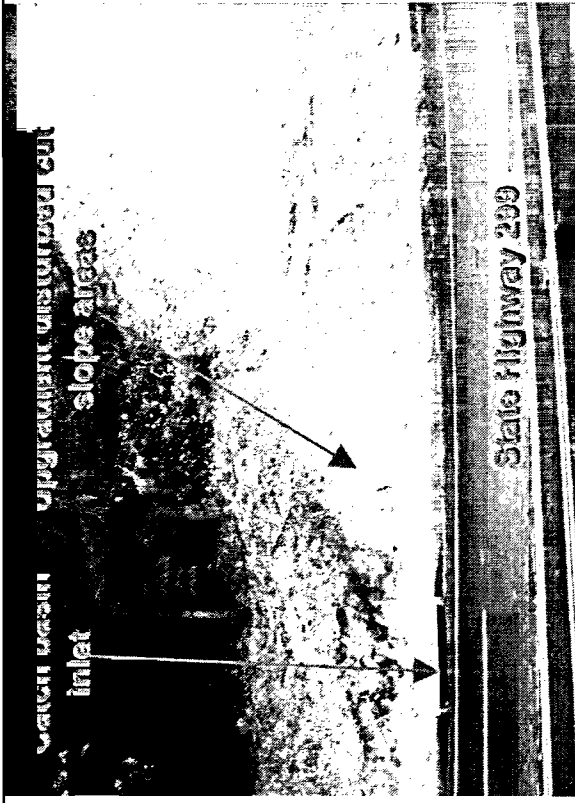
<div data-bbox="94 1516 147 1913" data-label="Section-Header"> <h1>Site Photographs</h1> </div>	<div data-bbox="94 676 180 1236" data-label="Text"> <p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2</p> </div>	<div data-bbox="94 220 120 569" data-label="Text"> <p>Photograph date: 10/14/2009</p> </div>
---	--	--

<div data-bbox="222 1087 795 1923" data-label="Image"> </div>	<div data-bbox="222 201 795 993" data-label="Image"> </div>
<div data-bbox="795 1087 1377 1923" data-label="Image"> </div>	<div data-bbox="795 201 1377 993" data-label="Image"> </div>
<div data-bbox="1377 1050 1464 1923" data-label="Caption"> <p>Photograph 11—Evidence of the discharge of sediment to and accumulated in the basin No. 1 which subsequently flows to basin No. 2 and the unnamed tributary to Crystal Creek</p> </div>	<div data-bbox="1377 151 1464 1050" data-label="Caption"> <p>Photograph 12 – Close-up view of sediment basin No. 1 outlet structure with sediment accumulation</p> </div>

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2	Photograph date: 10/14/2009
 <p>Crystal Creek</p> <p>Silt fence BMPs</p>	 <p>Sediment transport on embankment slope</p>	<p>Photograph 14 – Evidence of sediment transport on the embankment slope of the field constructed sediment basin No. 2. Inadequate silt fence BMP installation under culvert pipe</p>
 <p>Evidence of the discharge of sediment beyond the silt fence BMP</p> <p>Silt fence BMP that collapsed</p>	 <p>Evidence of field BMP (e.g., gulley formation)</p>	<p>Photograph 16 – Adequate BMPs were not implemented below field constructed sediment basin No. 1 culvert outlet pipe.</p>
<p>Photograph 15—SF BMPs were not adequately maintained (e.g., collapsed in areas) to prevent the discharge of sediment to the unnamed tributary.</p>		

Site Photographs		Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2	Photograph date: 10/14/2009
	<p>Photograph 17—Adequate BMPs were not implemented to prevent the discharge of sediment from disturbed slope area adjacent to the rip-rap conveyance channel which drains to the unnamed tributary.</p>		<p>Photographs 18 – Adequate BMPs were not implemented to prevent the discharge of sediment from a disturbed cut slope area adjacent to State Highway 299.</p>
	<p>Photograph 19—Evidence of sediment transport to State Highway 299 drainage swale from the adjacent unstabilized disturbed cut slope area.</p>		<p>Photographs 20 –Evidence of erosion (e.g. rill and gulley formation) and sediment transport from upgradient disturbed slope area (see Photo 18+19)</p>

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Top of Buckhorn Project Caltrans District 2</p>	<p>Photograph date: 10/14/2009</p>
--------------------------------	---	------------------------------------

		<p>Photograph 21—BMPs were not implemented to prevent the discharge of sediment from up-gradient disturbed cut slope areas to catch basin inlets.</p> <p>Photograph 22 – BMPs were not implemented to prevent the discharge of sediment from upgradient disturbed cut slope areas to catch basin inlets.</p>
---	---	--

Site Visit No. 8

Yankee Gulch Project
Site Visit Date: 10/14/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Yankee Gulch Project
Caltrans District 2**

The EPA Audit Team conducted a site visit at the Yankee Gulch project located approximately 17 miles west of Redding, CA on State Highway 299 east of the intersection of Lewiston Turnpike roadway in Shasta County. The project consisted of roadway realignment (i.e., curve correction) of State Highway 299.

The site visit conducted on October 14, 2009 coincided with a precipitation event on October 12 through October 14, 2009 which produced heavy rains. Precipitation data obtained from the California Data Exchange Center (CDEC) Clear Creek Station, located approximately 2.5 miles southwest of the Yankee Gulch project, indicated that rain began on October 13, 2009 and lasted through October 16, 2009. The total accumulation during the 24 hour period on October 13, 2009 was 7.76 inches of rain, and the accumulation during the 24 hour period on October 14, 2009 was 0.80 inches of rainfall. Site conditions observed on October 14, 2009 are summarized below.

As provided by Mark Harvey (Caltrans District 2 Maintenance Storm Water Coordinator), this project had been completed and a project closeout walk-through was conducted and approved by Caltrans maintenance personnel in mid-September 2009. At the time of inspection the Yankee Gulch project was being managed by Caltrans District 2 Maintenance staff. Final stabilization had not yet been achieved at the project.

Prohibition A.1 of the Permit states the “discharge of runoff from construction sites containing pollutants which have not been reduced using BAT for toxic pollutants and BCT for conventional pollutants to waters of the United States is prohibited.” Adequate BMPs were not implemented to prevent the discharge of sediment to the adjacent Crystal Creek receiving water located on the south side of State Highway 299. Specifically, adequate BMPs had not been implemented for the disturbed slope areas on the south side of State Highway 299 which subsequently drain to Crystal Creek. Although straw had been blown/spread on the disturbed slope areas, the slope was too steep for this BMP to be effective (see Photographs 1 and 2). There were no run-on control BMPs for the disturbed slope areas and adequate BMPs to break up the slope length had not been implemented. Evidence of erosion (e.g., rill and gully formation, sloughing), slope failure, and sediment transport was observed on the disturbed slope area draining to Crystal Creek south of State Highway 299 (see Photographs 3 and 4). As a result, there was a discharge of sediment from the disturbed slope areas to Crystal Creek (see Photographs 5 through 7).

Furthermore, adequate BMPs had not been implemented to prevent the discharge of sediment to the adjacent Yankee Gulch receiving waters located on the north side of State Highway 299. Specifically, adequate BMPs had not been implemented for the disturbed slope areas on the north side of State Highway 299 which drains to Yankee Gulch and subsequently flows south to Crystal Creek. Although straw had been blown/spread on the disturbed slope areas, the slope was too steep for this BMP to be effective (see Photographs 8 and 9). In addition, although silt fence BMPs had been implemented on the slope and around the box culvert inlet and wing walls, several lengths of silt fence had collapsed and were not installed on the contour around the box culvert inlet which was accentuating erosion and sediment accumulation into Yankee Gulch (see

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Yankee Gulch Project
Caltrans District 2**

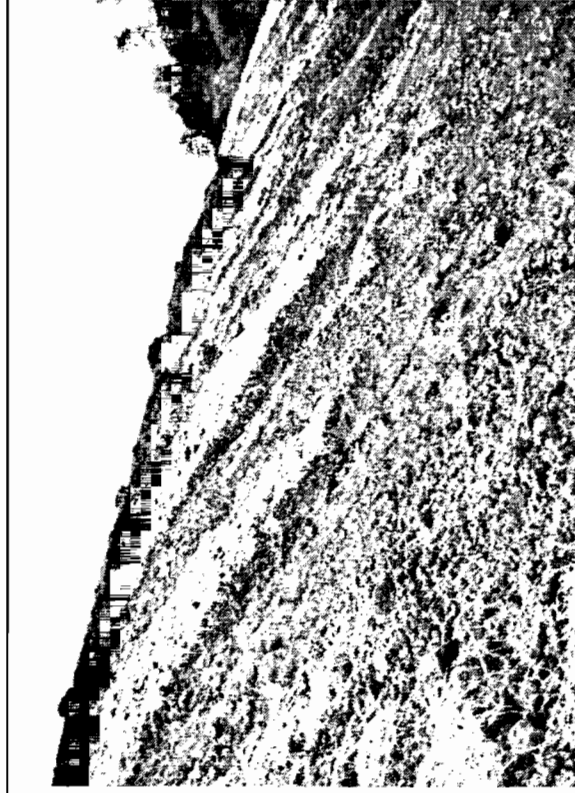
Photographs 10 and 11). As a result, there was a discharge of sediment from the disturbed slope areas on the north side of State Highway 299 to Yankee Gulch (see Photographs 11 and 12).

As provided by Mark Harvey (Caltrans District 2, Maintenance Storm Water Coordinator), there is no specific frequency for Caltrans Maintenance to conduct inspections of recently completed projects such as the Yankee Gulch project. It should also be noted that Caltrans District 2 representatives stated that all slopes prone to erosion had been inspected in the District. The site conditions observed at the Yankee Gulch project may indicate a lack of appropriate identification, prioritization, and tracking of slopes that are prone to erosion.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Yankee Gulch Project
Caltrans District 2

Photograph date: 10/14/2009



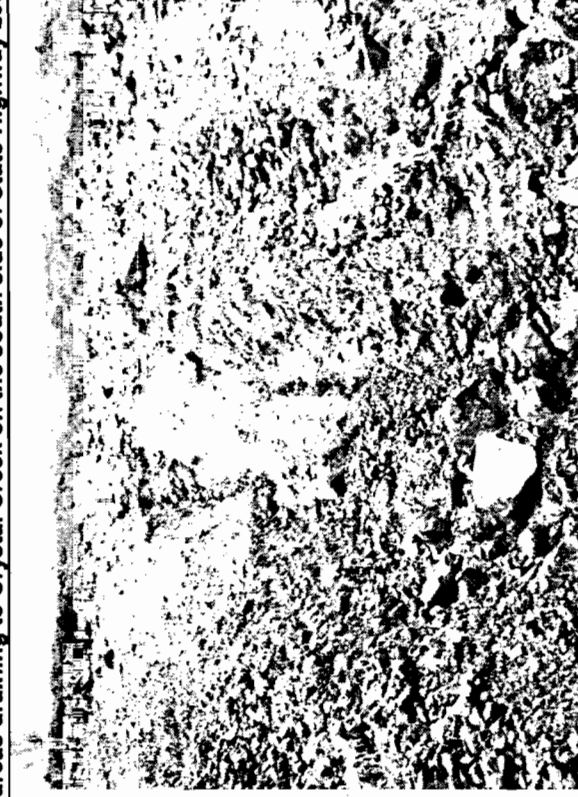
Photograph 1 – Evidence of erosion and slope failure on disturbed slope areas draining to Crystal Creek on the south side of State Highway 299



Photograph 3 – Evidence of erosion (e.g., rill and gully formation) and sediment transport from the disturbed slope failure



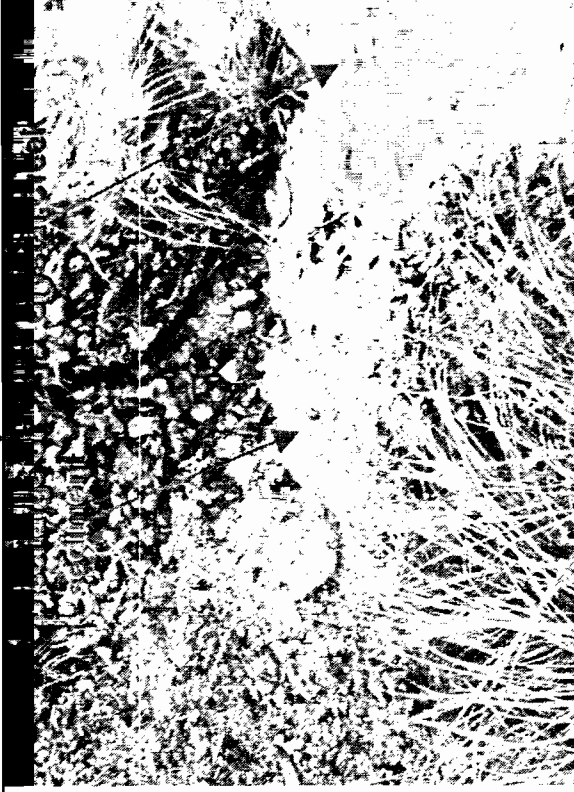
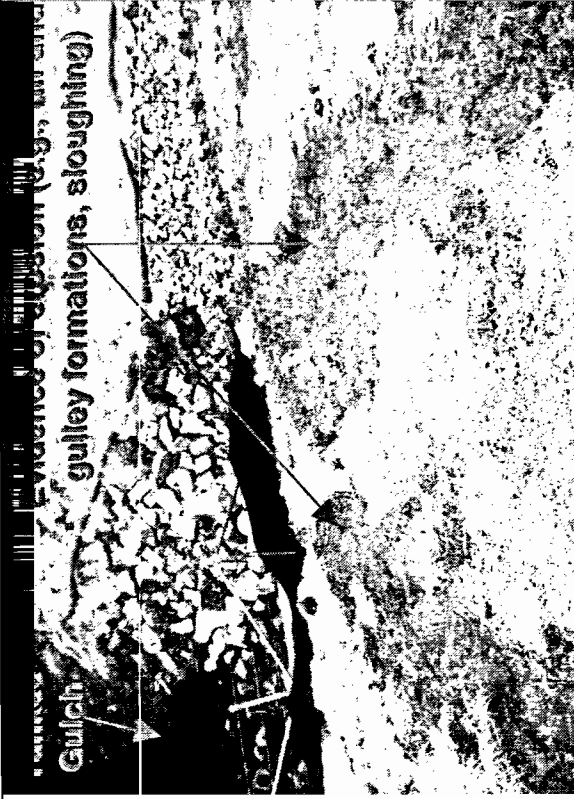


Photograph 2 – Evidence of erosion and slope failure on disturbed slope areas draining to Crystal Creek on the south side of State Highway 299

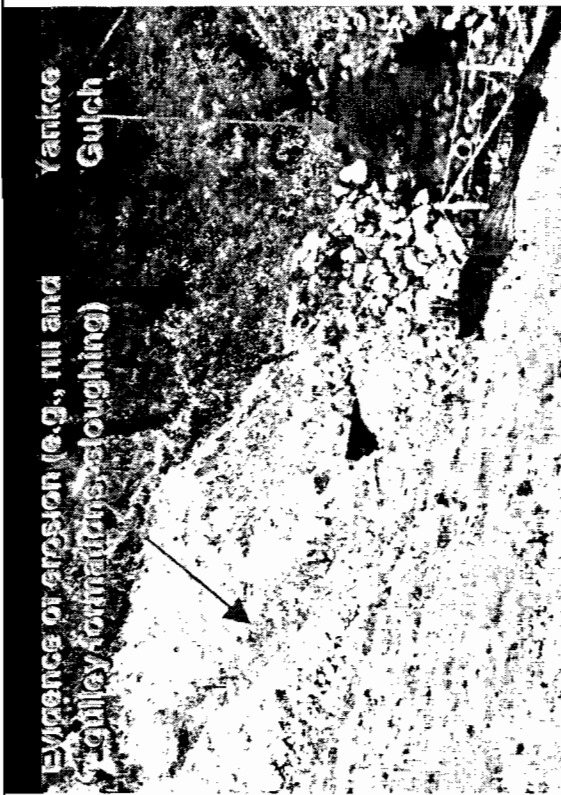





Photograph 4 – Visible evidence of erosion (e.g., rill and gully formation) on the disturbed slope area draining to Crystal Creek

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Yankee Gulch Project Caltrans District 2	Photograph date: 10/14/2009
-------------------------	---	-----------------------------

 <p data-bbox="505 1094 537 1461">Sediment accumulation</p>		Photograph 6 – Close-up of sediment accumulation shown in Photograph 5
 <p data-bbox="878 1094 911 1461">Sediment accumulation</p>	 <p data-bbox="902 222 935 974">Evidence of erosion (e.g., rill and gulley formation) Gulch</p>	Photograph 8 – Evidence of erosion (e.g., rill and gulley formation) and sediment transport from the disturbed slope failure

Site Photographs		Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Yankee Gulch Project Caltrans District 2	Photograph date: 10/14/2009
------------------	--	---	-----------------------------

 <p>Evidence of erosion (e.g., rill and gully formation) (e.g., rill and gully formation) (e.g., rill and gully formation)</p>	 <p>Silt fence BMPs collapsed in areas and evidence of the discharge of sediment to Yankee Gulch</p>	Photograph 10 – Silt fence BMPs collapsed in areas and evidence of the discharge of sediment to Yankee Gulch	
		Photograph 12 – Close-up view of Photograph 11 depicting the discharge of sediment and sediment accumulation in Yankee Gulch	
 <p>Silt Fence BMPs collapsed</p> <p>Discharge of sediment to Yankee Gulch</p>		Photograph 11—Visible evidence of slope failure and the discharge of sediment to Yankee Gulch receiving water	
		Photograph 12 – Close-up view of Photograph 11 depicting the discharge of sediment and sediment accumulation in Yankee Gulch	

Site Visit No. 9

**Last Chance Grade Roadway Construction Project
Site Visit Date: 10/21/2009**

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Last Chance Grade Roadway Construction Project
Caltrans District 1**

The EPA Audit Team conducted a site visit to the Last Chance Grade Roadway Construction Project located approximately 2.5 miles north of the intersection of Highway 101 and Wilson Creek Road in Del Norte County, CA. The project was located along steep slopes about 1000 feet to the east of the Pacific Ocean.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs.” Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for several disturbed areas associated with the construction project or for managing the storage of chemicals and materials at the construction site. Specifically, reinforced silt fence BMPs consisting of metal fencing, metal stakes, and silt fence material had been installed on the steep slopes down-gradient of disturbed areas associated with the construction of several retaining walls (see Photographs 1 and 2). The silt fence BMPs, however, were not adequately maintained and had collapsed in several areas (see Photographs 3, 4, and 5). As a result, there was a potential for the discharge of sediment off-site to the west. Based on discussions with Caltrans staff, it was unclear how the facility representatives could conduct thorough and effective inspections of the inaccessible silt fence BMPs, or determine whether pollutants had been discharged off-site (see Photographs 6 and 7).

Adequate BMPs were not implemented at the construction site for good housekeeping to properly manage the storage of chemicals and materials on-site. Containers of various chemicals, including a form release agent and petroleum products, were improperly stored without secondary containment or coverage (see Photographs 8, 9, 10 and 11). In addition, a portable toilet was not staked into the ground or otherwise secured and was located adjacent to a steep slope (see Photograph 12).

In addition, straw wattle BMPs used for stockpile management were improperly installed on impervious surfaces at the facility, and therefore were not properly entrenched in the ground to retain the stockpiled materials (see Photographs 13 and 14). As a result, there was a potential for the discharge of sediment to the roadway and off-site to the west. The Resident Engineer explained that the SWPPP had been amended to include the use of straw wattle BMPs on impervious surfaces; however, this was not confirmed by the EPA Audit Team.

The EPA Audit Team observed that a water storage tank (approximately 1,000-gallon capacity) located up-gradient had been punctured by a forklift and was leaking (see Photographs 15 and 16). Water was observed slowly flowing underneath the straw wattle BMPs that been placed on the impervious roadway surface adjacent to K-rail barriers near the southern end of the construction project (see Photograph 17). The straw wattle BMPs had been installed prior to the puncture incident. Water had flowed underneath the straw wattles and jersey barriers and was observed on the adjacent roadway (see Photograph 18).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Last Chance Grade Roadway Construction Project
Caltrans District 1

Photograph date: 10/21/2009



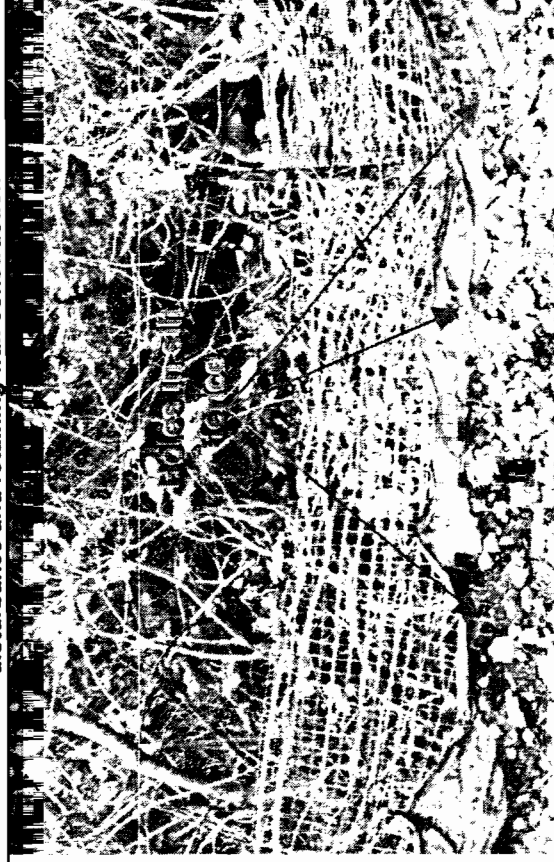
Photograph 1 – Example of reinforced silt fence BMP



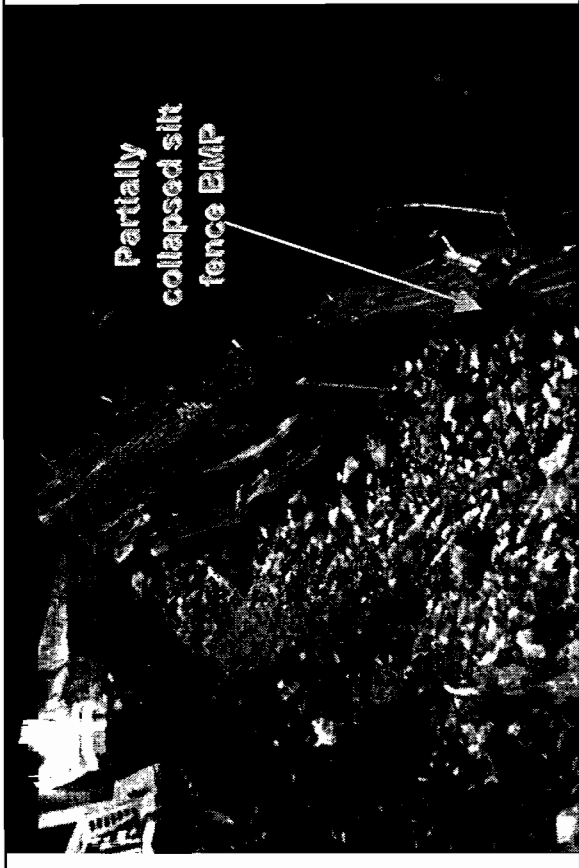



Photograph 2 – Example of silt fence BMP implemented down-gradient of disturbance and retaining wall construction






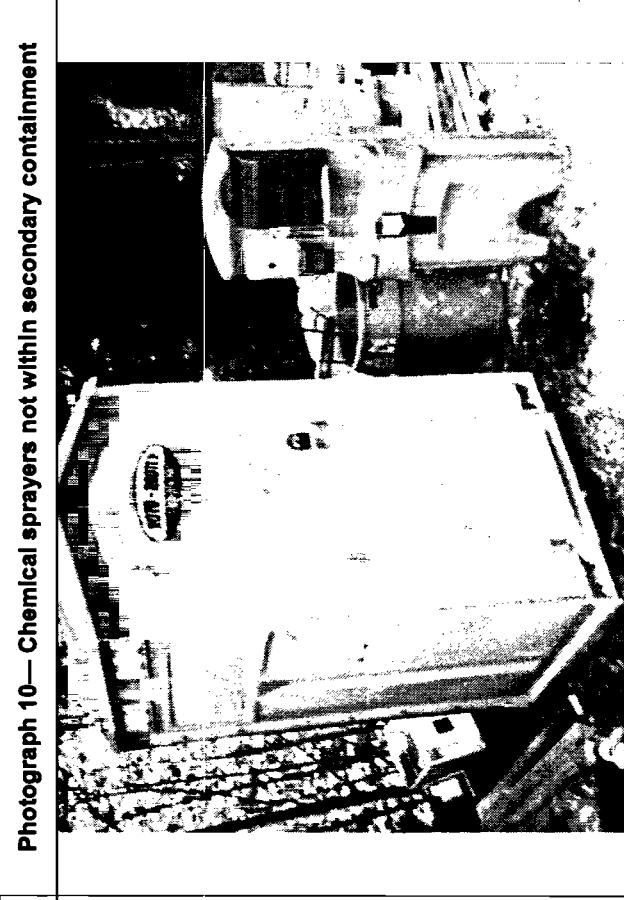


Photograph 3 – Example of sediment accumulation against silt fence BMP




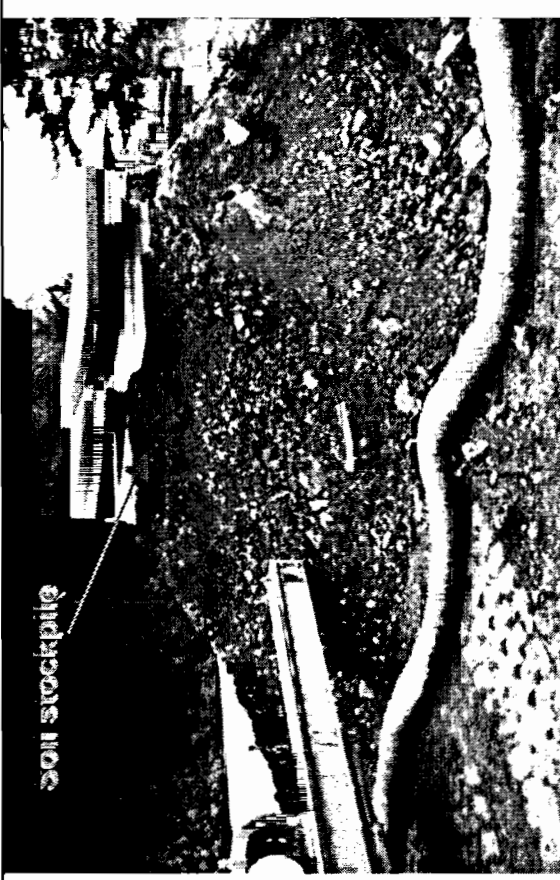
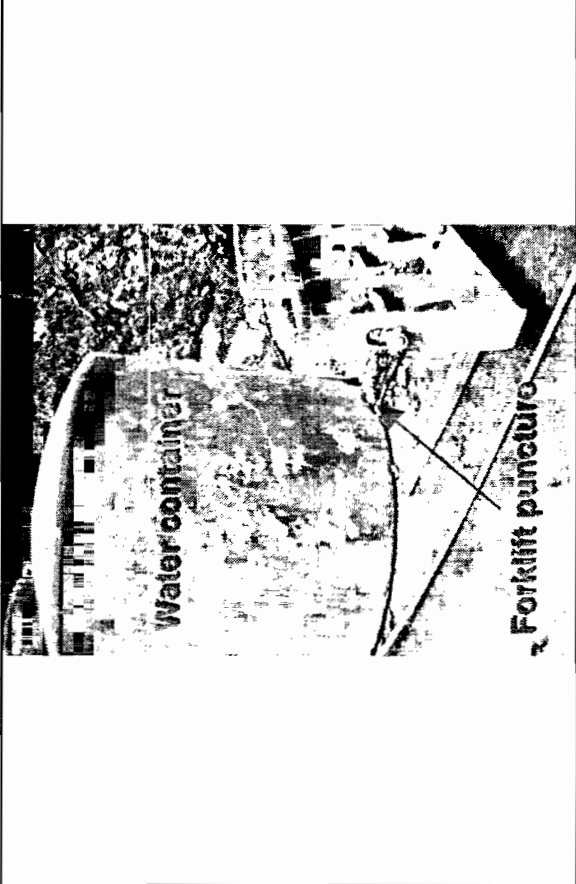

Photograph 4 – Another example of sediment accumulation and unmaintained silt fence

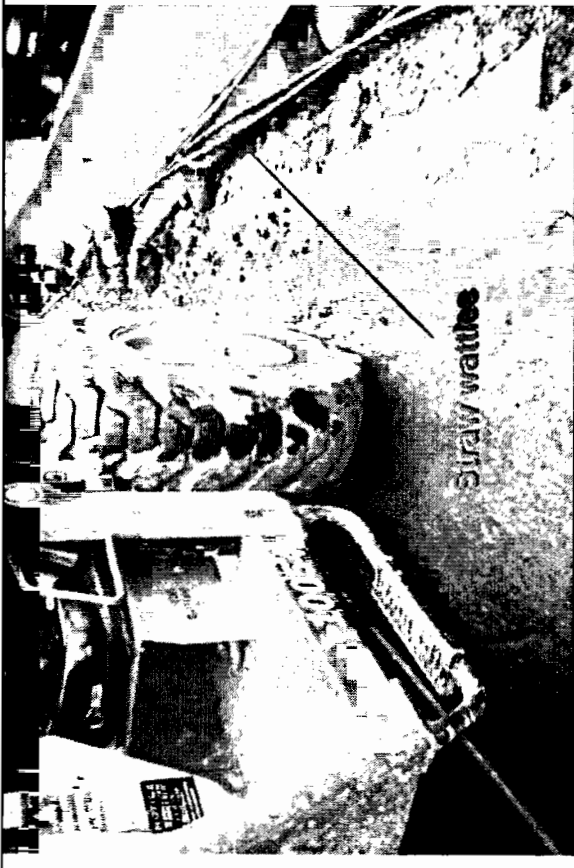
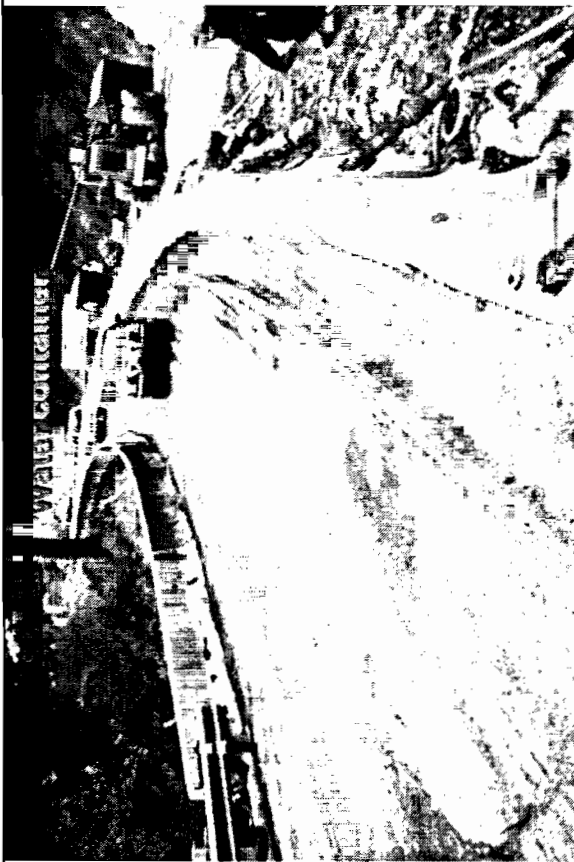
<h1>Site Photographs</h1>	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Last Chance Grade Roadway Construction Project Caltrans District 1	Photograph date: 10/21/2009
		<p>Photograph 5— Another example of sediment accumulation and unmaintained silt fence</p> <p>Photograph 6 – Example of silt fence BMP partially covered by collapsed vegetation</p>
		<p>Photograph 7— Another example of silt fence BMP partially covered by collapsed vegetation - view down slope to silt fence BMP</p> <p>Photograph 8 – 55-gallon drum of "Rock Drill 150" that is partially covered and not within adequate secondary containment</p>

<h1>Site Photographs</h1>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Last Chance Grade Roadway Construction Project Caltrans District 1</p>	<p>Photograph date: 10/21/2009</p>
---------------------------	--	------------------------------------

 <p>Close-up view of damaged secondary containment pan underneath 55-gallon drum</p>	 <p>Form release agent chemical containers</p>
 <p>Close-up view of damaged secondary containment pan underneath 55-gallon drum</p>	 <p>Chemical sprayers not within secondary containment</p>
 <p>Example of gas container not stored within secondary containment</p>	 <p>Portable toilet adjacent to steep slope</p>

<h1>Site Photographs</h1>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Last Chance Grade Roadway Construction Project Caltrans District 1</p>	<p>Photograph date: 10/21/2009</p>
---------------------------	--	------------------------------------

		<p>Photograph 13— Straw wattle not staked or entrenched into ground. Inappropriate application of wattles on impervious surface.</p>	<p>Photograph 14— Another example of straw wattle not staked or entrenched into ground. Inappropriate application of wattles on impervious surface.</p>
		<p>Photograph 15— View of forklift that had punctured the water container</p>	<p>Photograph 16— Close-up view of puncture in water container</p>

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Last Chance Grade Roadway Construction Project Caltrans District 1	Photograph date: 10/21/2009
		
Photograph 17— View down-gradient from water container (Note: Wetness on impervious surface and placement of straw wattles)		Photograph 18— View up-gradient to water container (Note: Wetness on roadway surface down-gradient of water container)

Site Visit No. 10

Isabel Avenue/Route 580 Interchange Project
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Isabel Avenue/Route 580 Interchange Project
EA No. 171334**

The EPA Audit Team conducted a site visit to the Isabel Avenue/Route 580 Interchange Project located on Route 580 in Alameda County.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that "program must include requirements of structural and nonstructural BMPs." Appendix D of the SWMP contains the "Statewide Storm Water Quality Practice Guidelines" which provide a description of each approved BMP for statewide application. Along the Portola Avenue Extension, adequate BMPs were not implemented for disturbed areas associated with an access road and overpass construction. Specifically, a silt fence BMP installed along the constructed Arroyo Los Positas diversion was improperly installed on an impervious surface, and therefore was not properly entrenched in the ground to retain sediment (see Photographs 1, 2, and 3).

In an area located upstream of the constructed diversion near the entrance to the construction access road, a silt fence BMP was improperly installed in a drainage depression leading to Arroyo Los Positas and had partially collapsed. Although two tiers of silt fence had been installed for BMP redundancy, both tiers were in need of maintenance and the first tier of silt fence had failed (see Photographs 4 and 5). As a result, there was a potential for the discharge of sediment to Arroyo Los Positas.

<h1>Site Photographs</h1>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Isabel Avenue/Route 580 Interchange Project EA No. 171334</p>	<p>Photograph date: 10/7/2009</p>
---------------------------	---	-----------------------------------

	
	
<p>Photograph 3 – Close-up view of area shown in Photograph 2</p>	<p>Photograph 4 – Silt fence BMP Installed in a drainage depression</p>

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Isabel Avenue/Route 580 Interchange Project
EA No. 171334

Photograph date: 10/7/2009



Photograph 5— Failure of first tier of silt fence shown in Photograph 4

Site Visit No. 11

Sunol Grade/Route 680 Roadway Rehabilitation Project
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Roadway Rehabilitation Project
EA No. 253794**

The EPA Audit Team conducted a site visit at the Scott Creek staging yard located west of Route 680 at the Scott Road interchange near the Alameda-Santa Clara County boundary. The Scott Creek waterway is located approximately 500 feet southeast of the staging yard.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs.” Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented at the Scott Creek staging yard for construction waste handling and disposal. Various construction wastes and chemicals were improperly disposed and/or stored throughout the Scott Creek staging yard (see Photographs 1 through 9). Uncovered and uncontained construction waste included asphalt release agent and petroleum products without secondary containment BMPs (see Photographs 6, 7, and 8). In an oversight inspection conducted on September 9, 2009, the Caltrans Construction Storm Water Coordinator’s inspector also identified the asphalt release agent and petroleum products lacking secondary containment, but these issues had not been corrected through adequate enforcement of the contract conditions as of October 7, 2009 (see Appendix C, Exhibits 6, 7, and 8).

Furthermore, coverage and containment BMPs had not been implemented for a sweeper and roadway waste stockpile at the Scott Creek staging yard (see Photographs 10 and 11). Caltrans Maintenance operates this site for the temporary storage of debris picked up by its road sweepers and road cleaning crews, before the waste is hauled to the nearest landfill for disposal. Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, K-rail barriers are not adequate to contain the collected waste. Provision I.3 of the Permit requires Caltrans to provide appropriate site specific BMPs for maintenance facilities.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Rehabilitation
EA No. 253794

Photograph date: 10/7/2009



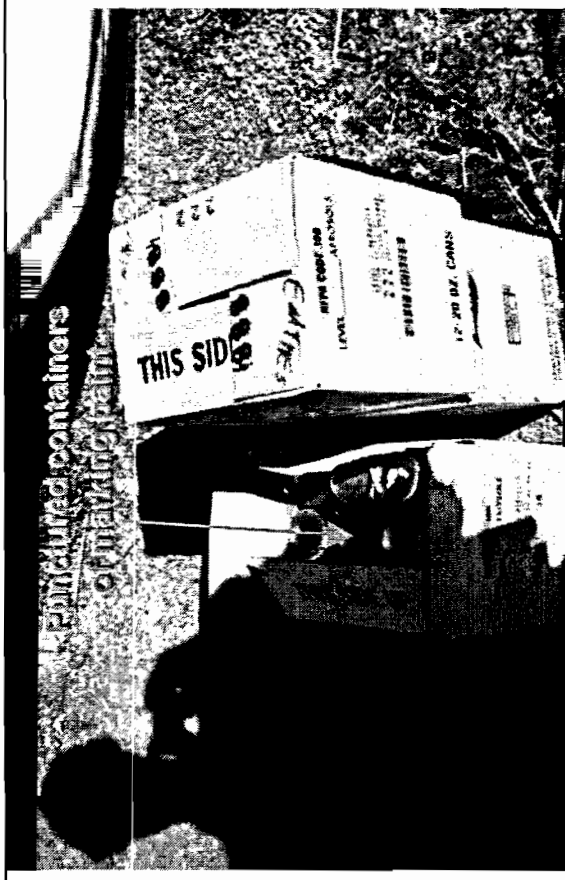
Photograph 1 – Construction wastes and chemicals improperly disposed



Photograph 2 – Close-up view showing open containers of pipe cement



Photograph 3 – Construction wastes and chemicals improperly disposed



Photograph 4 – Construction wastes and chemicals improperly disposed

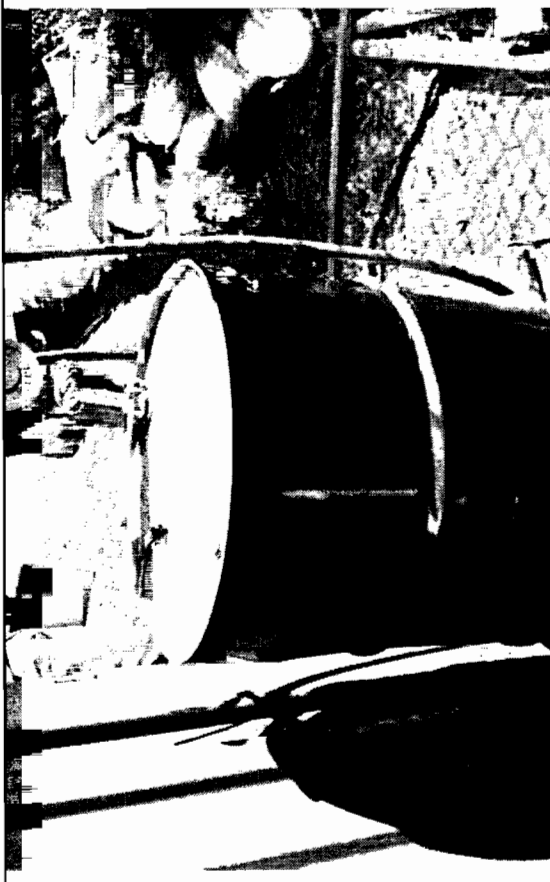
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Rehabilitation
EA No. 253794

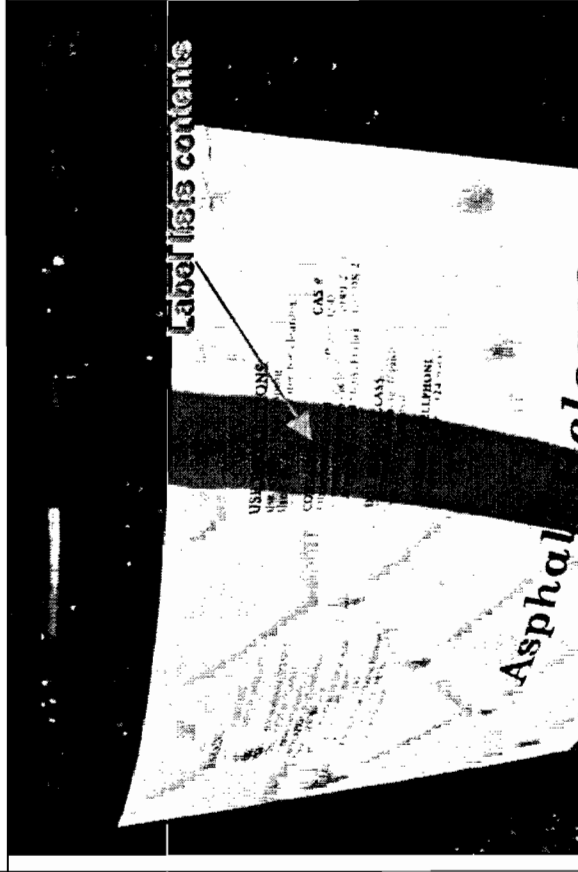
Photograph date: 10/7/2009



Photograph 5—Uncovered and uncontained construction waste



Photograph 6 – Asphalt release agent without secondary containment



Photograph 7—Close-up view of drum label shown in Photograph 6



Photograph 8 – Petroleum product without secondary containment

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Sunol Grade/Route 680 Rehabilitation EA No. 253794</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	--	-----------------------------------



Photograph 9— Pipe joint lubricant



Photograph 10 – Sweeper and roadway waste stockpile



Photograph 11— Close-up view of sweeper and roadway waste stockpile

Site Visit No. 12

**Smith River Safety Roadway Construction Project
Site Visit Date: 10/21/2009**

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Smith River Safety Roadway Construction Project
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Smith River Safety Project located along post mile 43–45 on Highway 101, in Del Norte County, CA. No active construction was observed during the site inspection and the project appeared to be nearing completion. However, adequate BMPs for erosion and sediment control were not implemented for several disturbed areas associated with the roadway construction project. The Pacific Ocean is located approximately 200 yards west of the construction project.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs.” Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for a disturbed drainage ditch along the east side of Highway 101 that discharges through a culvert crossing of the highway and subsequently to the Pacific Ocean (see Photographs 1 and 2). The Resident Engineer explained that the drainage ditch had been relocated to the east during the construction project and was in an area that received significant run-on from adjacent agricultural land. At the time of the inspection, vegetation had yet to be established in the drainage ditch to the north of the culvert, after it was disturbed about one year ago. Gravel check dam BMPs had been installed in the drainage ditch to dissipate flows (see Photograph 3); however, the check dams were not included in the SWPPP as approved BMPs. As a result, there was a potential for the discharge of sediment off-site to the west from the disturbed drainage ditch. Vegetation had been established in the drainage ditch to the south of the culvert crossing (see Photographs 4 and 5), however, straw had been spread over the ground surface in the drainage ditch which could potentially be entrained and discharged off-site. Furthermore, on the west side of the culvert crossing, straw had been spread over the ground surface in and around the drainage channel (see Photographs 6 and 7).

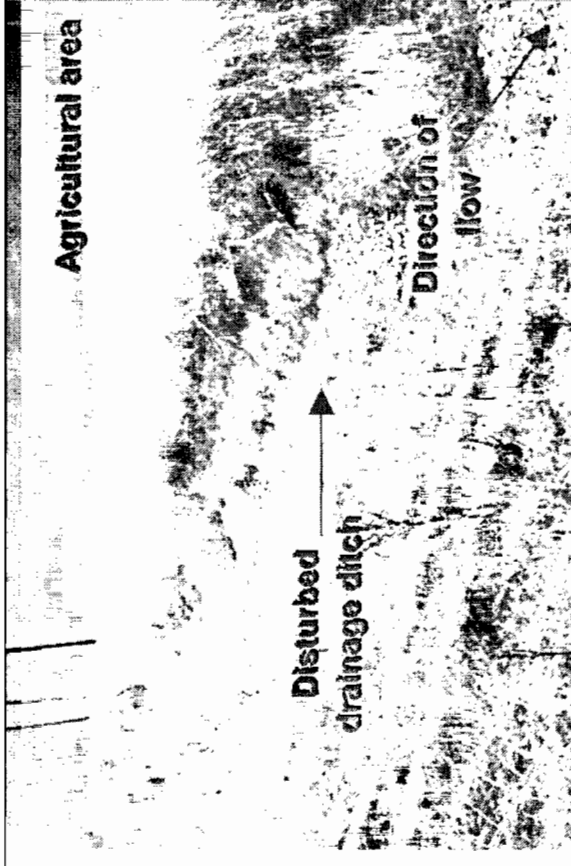
In addition, straw wattle BMPs had been removed from an area above the box culvert crossing of Lopez Creek near the southern end of the construction project (see Photographs 8, 9 and 10). As a result, a small area of disturbance was located directly above the box culvert crossing and there was a potential for the discharge of sediment to Lopez Creek.

Moreover, evidence of sidecast asphalt pieces in areas adjacent to the roadway were observed near the northern end of the construction project (see Photograph 11).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Smith River Safety Roadway Construction Project
Caltrans District 1

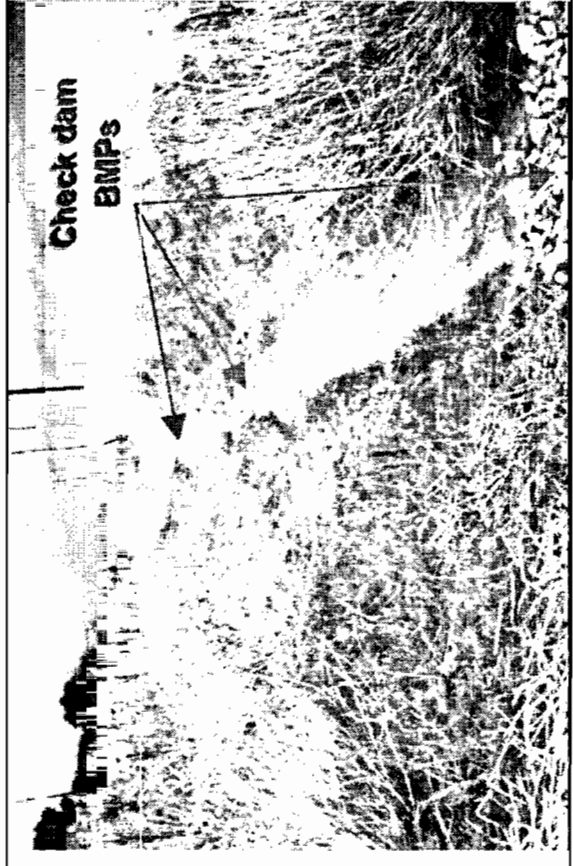
Photograph date: 10/21/2009



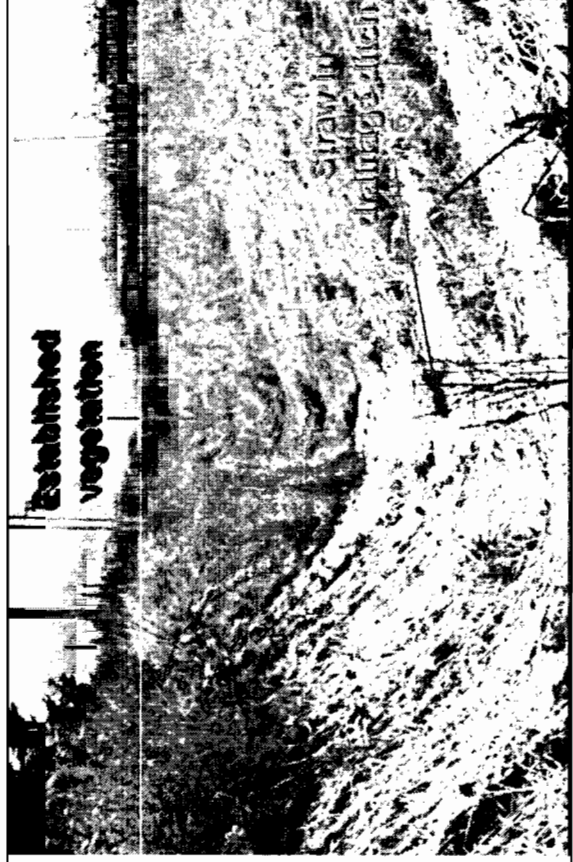
Photograph 1 – View of disturbed drainage ditch looking to the northeast



Photograph 2 – Closer view of disturbed drainage ditch and culvert inlet



Photograph 3 – View up drainage channel



Photograph 4 – View of drainage ditch south of the culvert inlet

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Smith River Safety Roadway Construction Project
Caltrans District 1

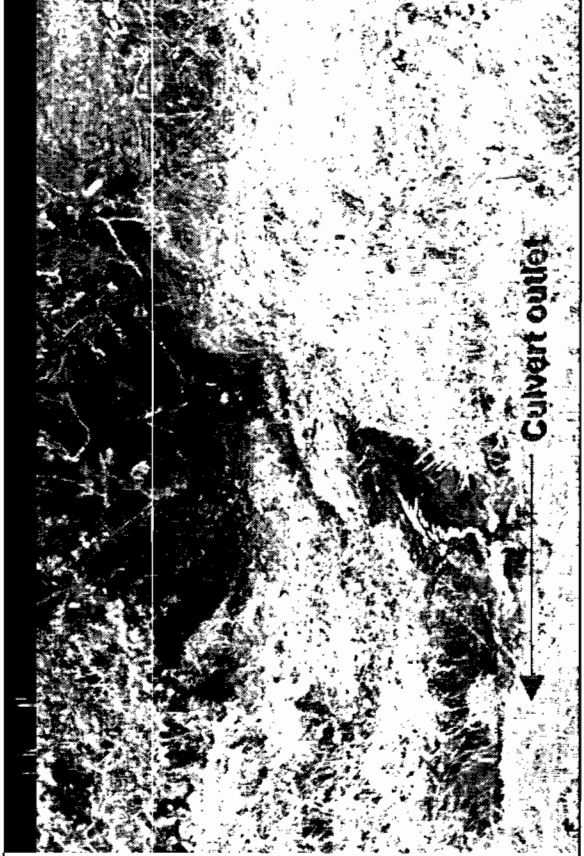
Photograph date: 10/21/2009



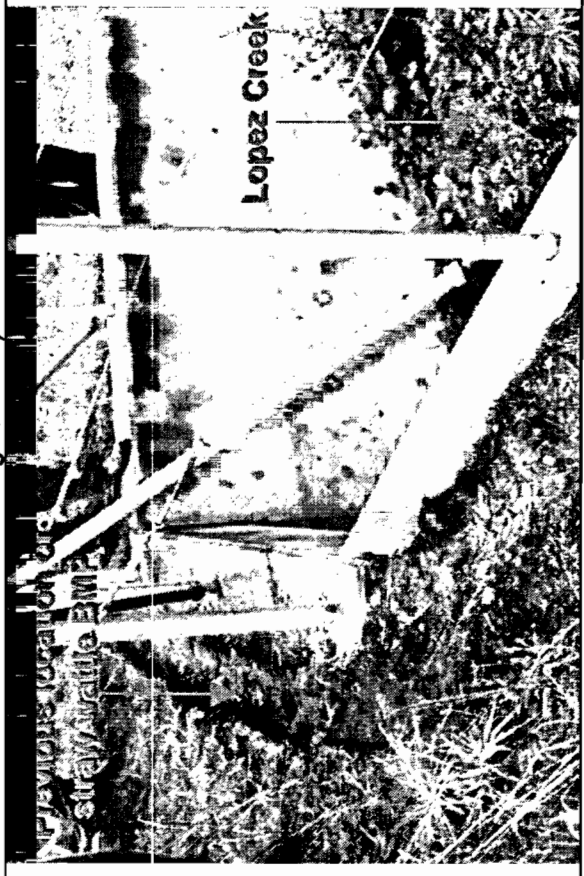
Photograph 5— View of drainage ditch south of the culvert inlet



Photograph 6 – West side of culvert outlet (Note: Straw around and within drainage channel)



Photograph 7— Another view of the west side of culvert outlet

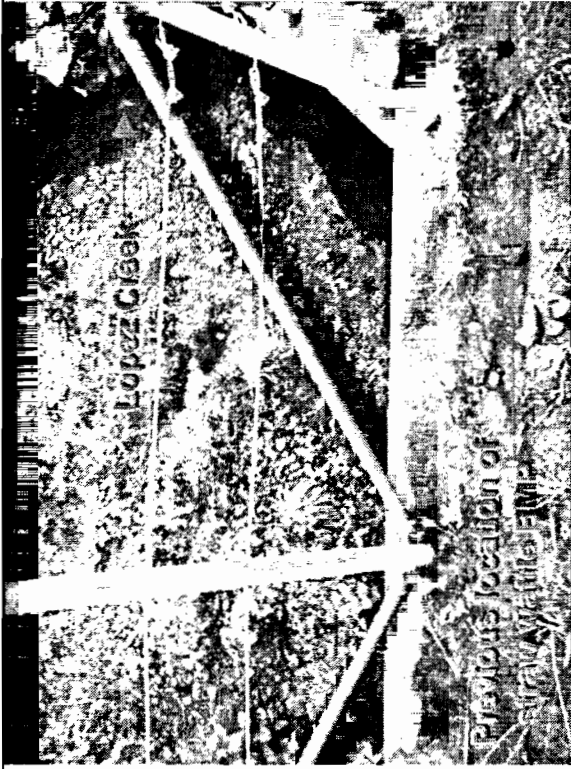


Photograph 8 – Area above culvert crossing of Lopez Creek

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Smith River Safety Roadway Construction Project
Caltrans District 1

Photograph date: 10/21/2009



Photograph 9— Another view of the area above the culvert crossing of Lopez Creek



Photograph 10— Culvert crossing of Lopez Creek



Photograph 11— Sidecast asphalt pieces along side of roadway at northern end of construction project

Site Visit No. 13

Dana to Downtown Project
Site Visit Date: 10/14/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Dana to Downtown Project
EA No. 02328034**

The EPA Audit Team conducted a site visit at the Dana to Downtown Project located in Redding on I-5 from 0.1 km north of Hartnell overcrossing to 0.9 km north of Hilltop Drive overcrossing, and on Route 44 from Pine Street to 0.2 km west of the Routes 5/44 separation.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs.” Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented for the disturbed areas associated with the replacement construction of the Sacramento River Bridge (a four span concrete box girder bridge replacement). Specifically, portions of the disturbed slope area along the southeastern side of the bridge had been temporarily stabilized and the hay bale flow dissipation BMPs had been improperly installed on an impervious surface (see Photograph 1).

In an area along the northern portion of Interstate 5 and east of the Auditorium Drive Bridge, a perimeter control silt fence located at the toe of the slope had failed (see Photographs 2 and 3). As a result, there was potential for the discharge of sediment offsite into the Sacramento River Turtle Bay Park (see Photograph 3).

Adequate BMPs were not implemented for disturbed areas associated with the disturbed slope area under the Auditorium Drive Bridge overpass replacement and construction. Specifically, silt fence BMPs had accumulated sediment to approximately half the exposed silt fence height in several areas (see Photograph 4). Although three tiers of silt fence had been installed for BMP redundancy, the tiers were in need of maintenance (see Photograph 4), and sediment was visible beyond the BMPs on the highway shoulder.

Furthermore, adequate BMPs were not implemented at the staging area on the southeast corner of the Auditorium Drive Bridge adjacent to Interstate 5. Specifically, perimeter controls were not implemented around a temporary construction material storage pile (see Photograph 5). Additionally, the portable toilet located in the staging area had not been secured (see Photograph 6).

Moreover, adequate BMPs were not implemented and maintained to prevent the discharge of sediment and debris at inlets located at the staging area on the southeast corner of the Auditorium Drive Bridge and along the bike path on the north side of Interstate 5 adjacent to the Auditorium Drive Bridge main staging area. The straw wattle implemented at the drop inlet located near the Auditorium Drive Bridge was badly deteriorated and had not been properly entrenched (see Photograph 7). Although rock sacks had been installed to protect the inlet, sediment had accumulated around and in the storm drain inlet located along the bike path (see Photograph 8).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Dana to Downtown Project
EA No. 02328034

Photograph date: 10/14/2009



Photograph 1 – View of disturbed slope at Sacramento River Bridge



Photograph 2 – View of temporary plastic slope stabilization along the north side of I-5, at the terminus of the bike path



Photograph 3 – View of deteriorated slope stabilization BMP and collapsed silt fence in Photograph 2



Photograph 4 – Silt fence on the north side of I-5, view facing south-southeast

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Dana to Downtown Project EA No. 02328034	Photograph date: 10/14/2009
-------------------------	---	-----------------------------



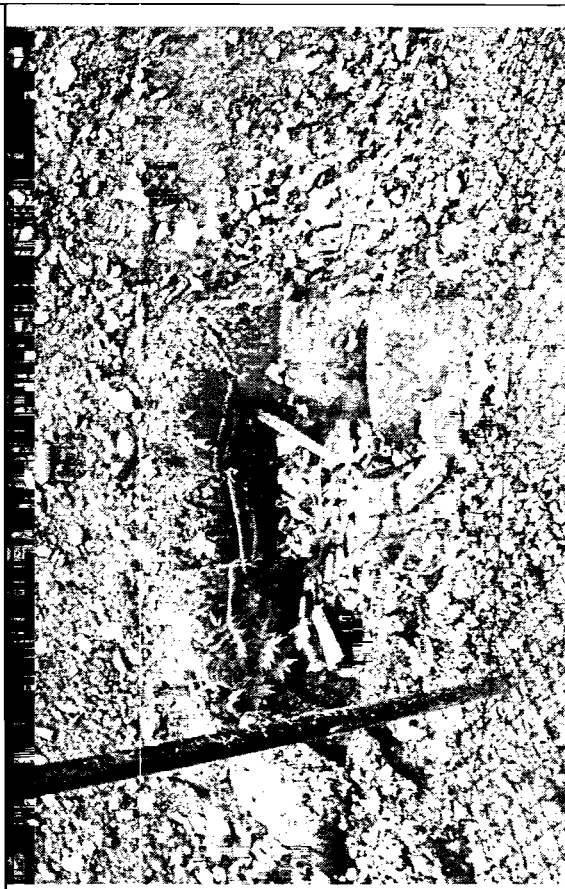
Photograph 5 – Lack of perimeter control BMPs around a construction material disposal stockpile



Photograph 6 – View of unsecured portable toilet



Photograph 7 – Storm drain inlet at the northwestern portion of the Auditorium Drive Bridge temporary staging area



Photograph 8 – Storm drain inlet located along the bike path adjacent to Interstate 5

Site Visit No. 14

**Tudor Bypass Project
Site Visit Date: 10/7/2009**

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Tudor Bypass Project
Caltrans District 3**

The EPA Audit Team conducted a site visit at the Tudor Bypass project located on State Highway 99 from the intersection with Hull Road to the intersection with Wilson Road in Sutter County, CA. The project consisted of a roadway realignment of State Highway 99.

Provision H.1.b of the Permit requires Caltrans to implement a program to control all construction in the rights-of way and states that “program must include requirements of structural and nonstructural BMPs.” Appendix D of the SWMP contains the “Statewide Storm Water Quality Practice Guidelines” which provide a description of each approved BMP for statewide application. Adequate BMPs were not implemented at approximately Station 338 + 60 to prevent the discharge of sediment from disturbed embankment slopes adjacent to the irrigation channel traversing through the project (see Photographs 5, 6, and 8). BMPs were not implemented to limit run-on to the slope and the surface of the slope was not stabilized. Evidence of sediment accumulation was observed in the irrigation channel culvert pipe (see Photographs 8 and 9). As a result, there was a discharge of sediment to the irrigation channel which subsequently drains to levees at Sutter Bypass, and ultimately to the Sacramento River

Adequate structural and non-structural BMPs had not been implemented for up-gradient areas of disturbance located directly adjacent to an irrigation channel located at Station 300 + 00 (see Photographs 13 through 16). Specifically, erosion and sediment controls had not been implemented for disturbed slope areas and no inlet protection BMPs had been implemented. As a result, there was a potential for the discharge of sediment from the up-gradient areas of disturbance to the irrigation channel which subsequently drains to levees at Sutter Bypass and ultimately to the Sacramento River.

In addition, BMPs were not adequately maintained for the adjacent roadway drainage swale located at approximately Station 300 + 00 on the west side of the roadway. Evidence of erosion (e.g., rill and gully formations) was observed on the drainage swale embankment slopes (see Photographs 17 and 18). As a result, there was a potential for the discharge of sediment to the drainage swale which subsequently drains to the irrigation channel and levees at Sutter Bypass, and ultimately to the Sacramento River.

Note: Additional site conditions and inadequate structural and non-structural controls are shown in the attached site photographs log.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Tudor Bypass Project
Caltrans District 3

Photograph date: 10/7/2009



Photograph 1 – Drainage swale adjacent to roadway without adequate BMPs implemented (Drill seeding only)



Photograph 2 – Unstabilized drainage swale and slope adjacent to roadway



Photograph 3 – Uncontained concrete waste adjacent to roadway drainage swale



Photograph 4 – Close-up of Photograph 3 and concrete waste

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Tudor Bypass Project
Caltrans District 3

Photograph date: 10/7/2009



Photograph 5 – View looking upgradient on irrigation channel located adjacent to project. Note unstabilized slopes adj. to irrigation channel.



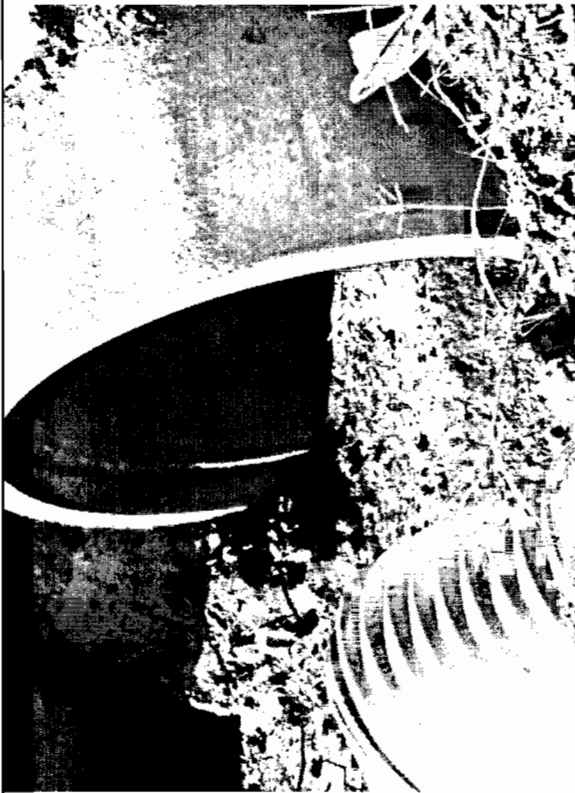
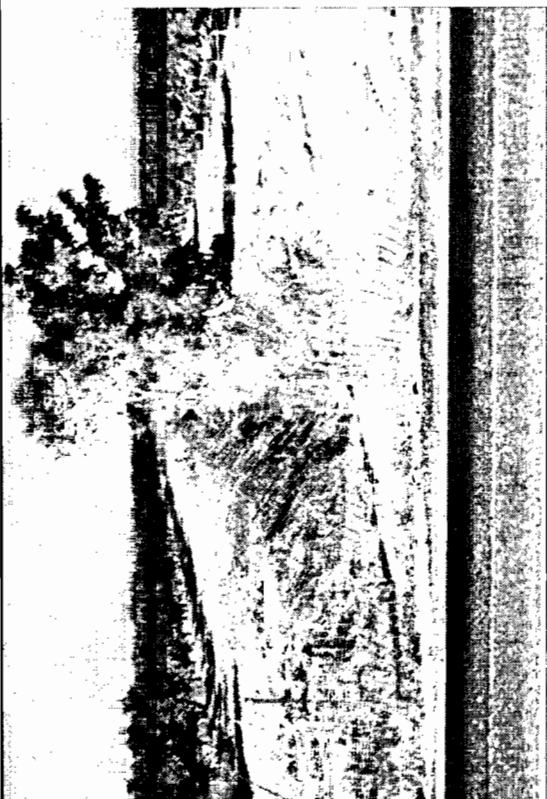
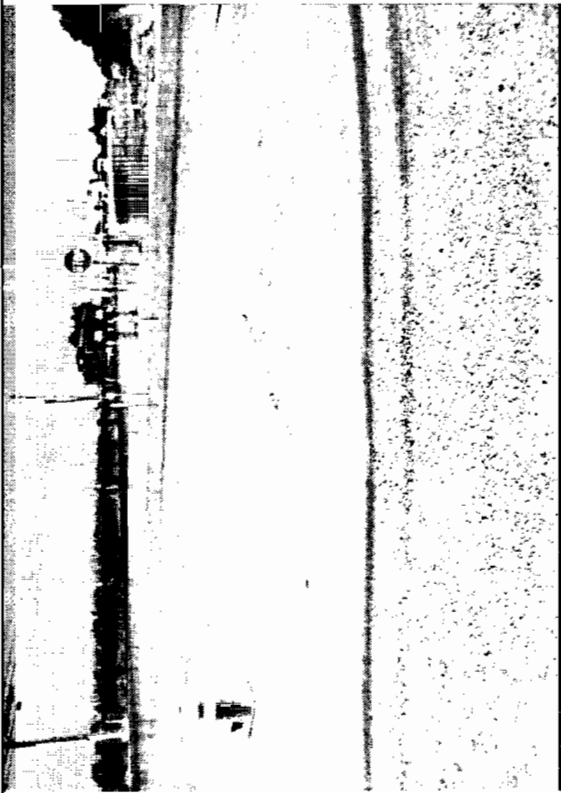

Photograph 7 – Culvert pipe inlet with no BMPs implemented – drains to irrigation ditch.



Photograph 6 – Culvert outlet pipes and disturbed embankment slope in irrigation ditch



Photograph 8 – Culvert pipe outlet from Photograph 7 to irrigation channel.

Site Photographs		Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Tudor Bypass Project Caltrans District 3	Photograph date: 10/7/2009
		<p>Photograph 9 – Visible sediment accumulation in the irrigation channel and associated culvert pipe</p>	<p>Photograph 10- View of down-gradient irrigation channel below outlet. Note: Inlet to this area is shown in Photograph 9.</p>
		<p>Photograph 11 –Tracking control BMPs were not implemented near Station 346 + 70.</p>	<p>Photograph 12 – No tracking control BMPs implemented at Sta. 346 + 70.</p>

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Tudor Bypass Project
Caltrans District 3

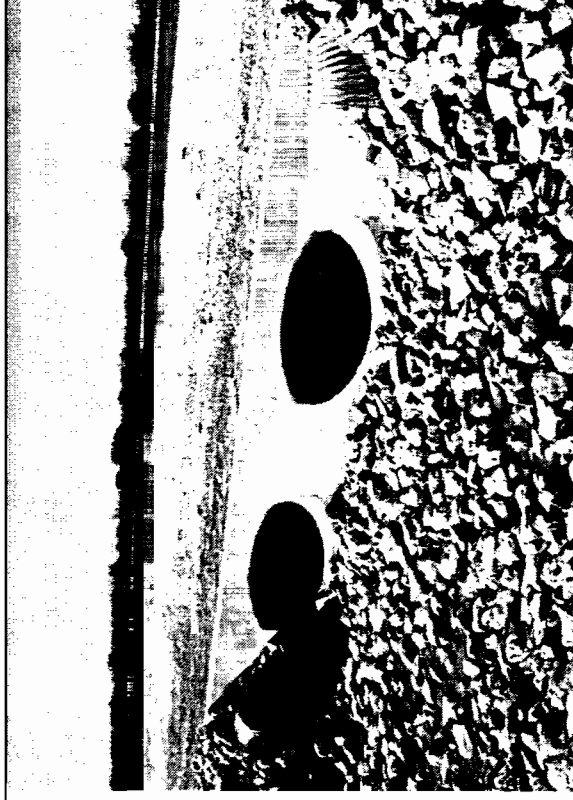
Photograph date: 10/7/2009



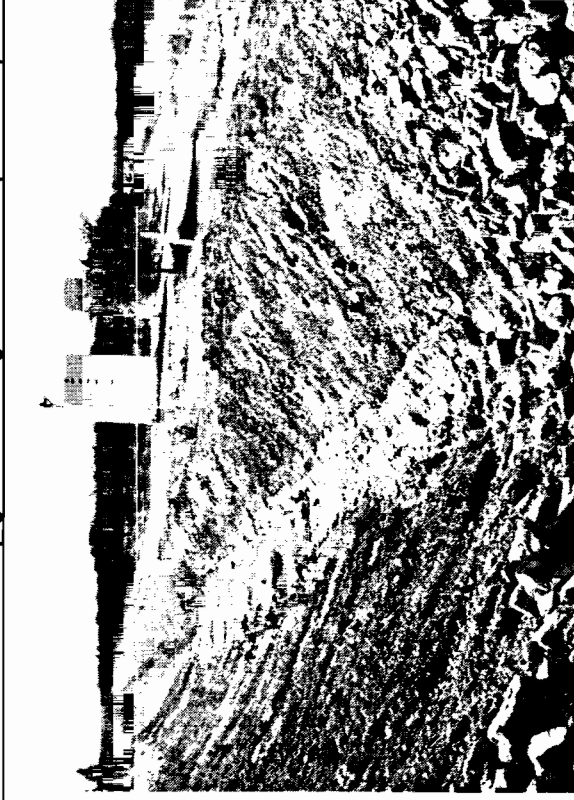
Photograph 13 – Adequate E&S controls were not implemented for areas of disturbance up-gradient of Irrigation channel (East side)



Photograph 15 – Inlet protection BMPs were not implemented for a culvert inlet draining to the Irrigation channel.



Photograph 14 - Adequate E&S controls were not implemented for areas of disturbance up-gradient of Irrigation channel (West side)



Photographs 16 – BMPs were not implemented for the entire disturbed slope areas of the adjacent roadway drainage swale (East side).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Tudor Bypass Project
Caltrans District 3

Photograph date: 10/7/2009



Photograph 17 – Evidence of previous erosion (e.g., rill/gully formation) was observed on the adjacent roadway drainage swale slopes (West side).



Photograph 18 – Vantage point view of Photograph 17. Adjacent roadway swale drains to irrigation channel near top of Photograph.



Photograph 19 – Silt fence not adequately maintained (e.g., collapsed in areas) near the new Hwy 99 and Wilson Road Intersection.



Photograph 20 – Adequate tracking control BMPs had not been implemented at the Wilson Road Intersection.

Site Visit No. 15

Sunol Grade/Route 680 Roadway Rehabilitation Project
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Roadway Rehabilitation Project
EA No. 4A5204**

The EPA Audit Team conducted a site visit at the Sunol Grade/Route 680 Roadway Rehabilitation Project located west of Route 680 at the Vargas Road interchange in Alameda County, CA. Provision E.1 of the Permit states “Caltrans shall maintain and implement an effective SWMP.” Provision F of the Permit states “Caltrans shall implement the program specified in the SWMP.” Appendix D of the Caltrans SWMP, Section 4.5.9, Stabilized Construction Roadway, states “properly grade roadway to prevent runoff from leaving construction site...stabilize roadway using aggregate, asphalt concrete, or concrete based on site conditions.” Adequate BMPs were not implemented for the disturbed areas associated with a construction access road. Specifically, proper drainage had not been provided for the access road (see Photograph 1) and the road had failed in areas (see Photographs 2, 3, and 4). Moreover, several disturbed areas of the access road fill slope were unprotected as BMPs had not been implemented to prevent the discharge of sediment offsite to the west (see Photographs 5, 6, and 8).

Appendix D of the Caltrans SWMP, Section 4.5.1, Temporary Sediment Control, states “repair undercut silt fences...repair or replace split, torn, slumping or weathered fabric.” The EPA Audit Team observed areas along the access road fill slope where the silt fence BMP had not been adequately inspected and maintained and several lengths of silt fence had collapsed (see Photographs 6 and 7).

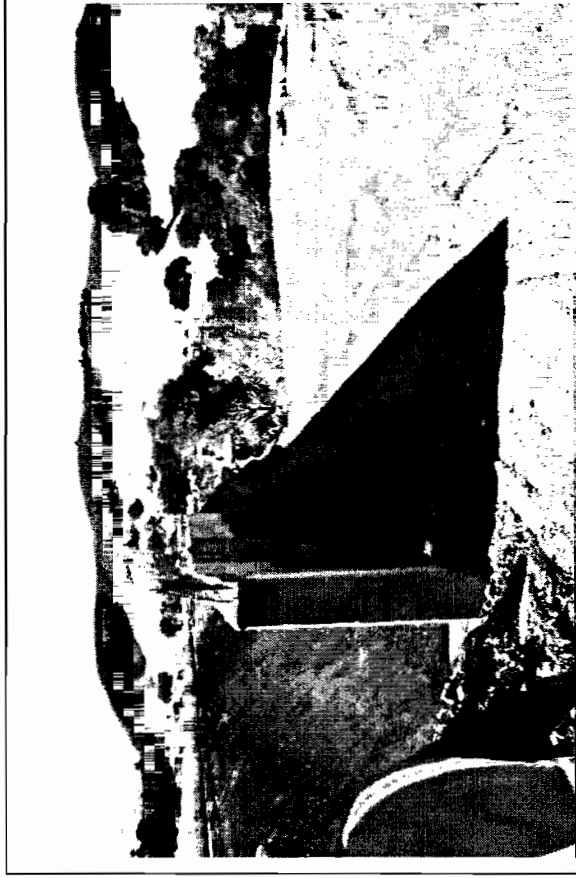
Additionally, adequate BMPs were not implemented for vehicle tracking control at the construction site entrance off Vargas Road. Although gravel had been placed at the access road entrance, the length of the pad and size of the gravel were too small to be effective (see Photograph 8). As a result, sediment had been transported onto Vargas Road (see Photographs 8 and 9).

Provision G.5 of the Permit states “Caltrans shall have an inspection program to insure actions are implemented and facilities are constructed, operated, and maintained in accordance with this NPDES Permit and the SWMP.” In an oversight inspection conducted on September 28, 2009, the Caltrans Construction Storm Water Coordinator’s inspector also identified the lack of adequate vehicle tracking control and had similar issues with “toe of slope BMP measures,” but these issues had not been corrected through adequate enforcement of the contract conditions as of October 7, 2009 (see Appendix C, Exhibits 9 and 10). Furthermore, the issues identified by the Caltrans Construction Storm Water Coordinator’s inspector in a SWPPP punch-list, generated from inspections conducted prior to September 25, 2009, demonstrate the issues had been outstanding for a longer period of time (see Appendix C, Exhibit 11).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Rehabilitation
EA No. 4A5204

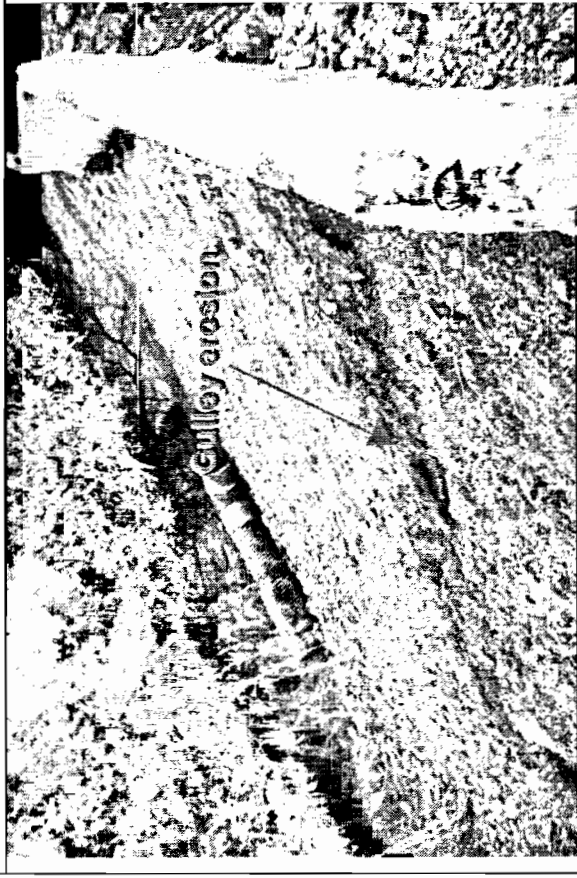
Photograph date: 10/7/2009



Photograph 1 – View down-gradient along access road



Photograph 2 – Failed fill slope along access road



Photograph 3 – Slope erosion below undercut K-rail shown in Photograph 2



Photograph 4 – Failed area along access road

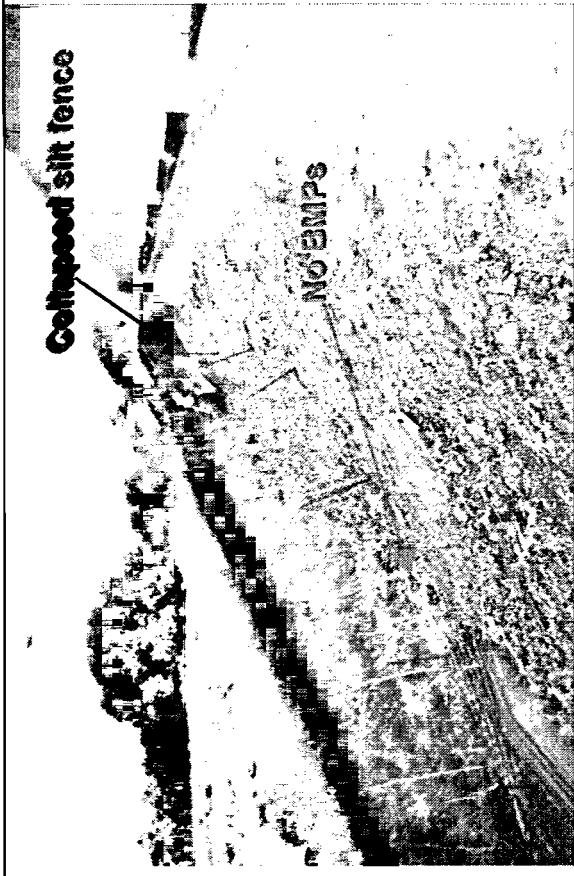
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Rehabilitation
EA No. 4A5204

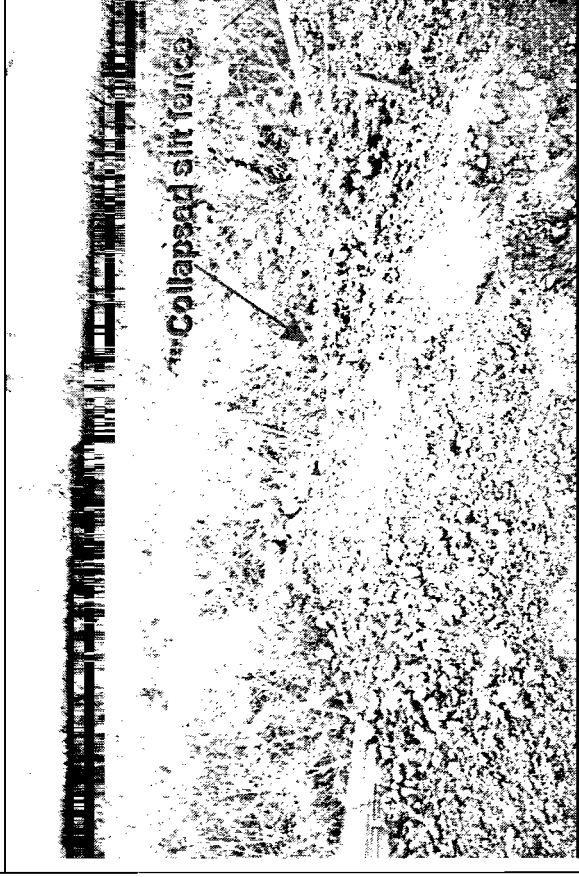
Photograph date: 10/7/2009



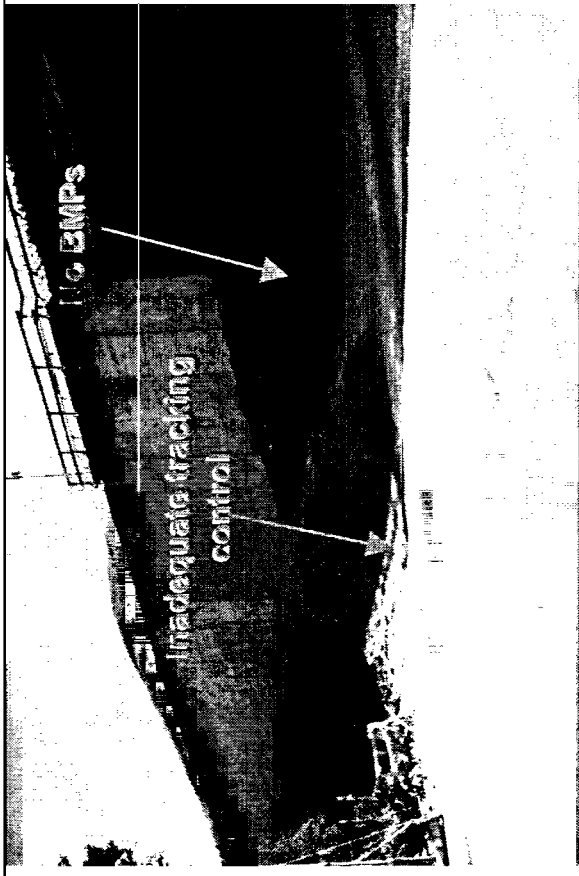
Photograph 5— Fill slope along access road without BMPs



Photograph 6 – Fill slope along access road without BMPs



Photograph 7— Collapsed silt fence due to slide

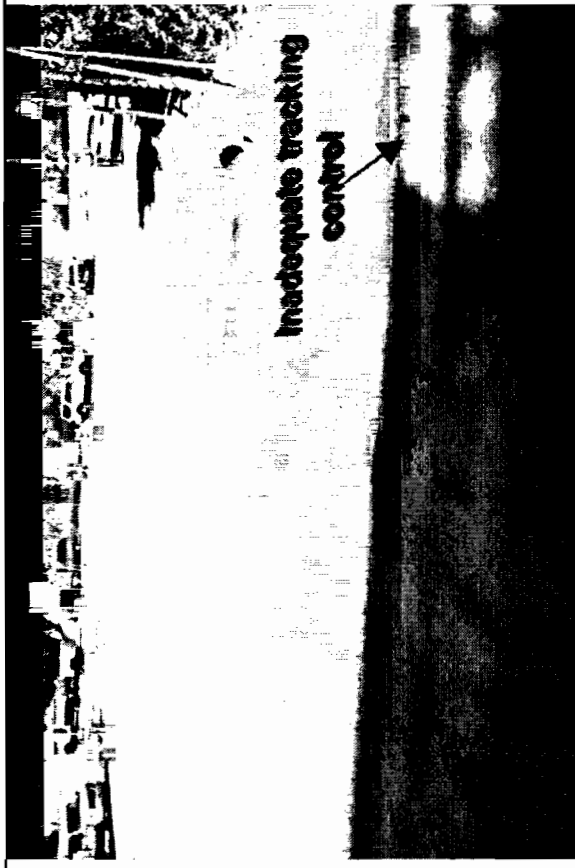


Photograph 8 – View of fill slope along access road without BMPs and vehicle tracking control pad

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Sunol Grade/Route 680 Rehabilitation
EA No. 4A5204

Photograph date: 10/7/2009



Photograph 9— Sediment conveyed onto roadway

Appendix E

Maintenance Program Site Visit Reports

Site Visit No. 16

**Willow Creek Highway Maintenance Facility
Site Visit Date: 10/22/2009**

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

The EPA Audit Team conducted a site visit at the Willow Creek Highway Maintenance Facility located at post mile 0.6 Highway 96, Willow Creek, CA. The Trinity River is approximately 1000 feet northeast of the facility and Willow Creek is approximately 1000 feet south of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. As explained by the Highway Maintenance Supervisor, most of the storm water runoff at the facility flows to the northwest corner of the facility either by overland flow or through a culvert inlet and pipe (see Photographs 1, 2 and 3). He added that storm water runoff does not generally discharge off-site from this location to the adjacent PG&E facility but rather ponds and remains as standing water until it infiltrates into the ground or evaporates. Nonetheless, evidence of sediment discharged to the northwest corner of the facility was observed (see Photograph 3). Furthermore, a silt fence BMP had been installed in the concentrated flow pathway of the culvert outlet, was not entrenched into the ground, and had been installed backwards (see Photographs 3 and 4).

In addition, a stockpile of roadway abrasives was stored up-gradient of the storm drain culvert inlet in an uncovered area, and on the impervious ground surface (see Photograph 5). Straw wattle BMPs had been placed around the stockpile on the downslope side; however, the straw wattles were improperly installed on the impervious surface of the facility, and therefore were not properly entrenched in the ground to retain the stockpiled materials (see Photograph 6). Furthermore, what appeared to be a salt residue was observed around the stockpile which indicated that the stockpile itself contained salt, or the straw wattles had previously been used for the containment of a salt-bearing product (see Photograph 7). As a result, there was a potential for the discharge of stockpiled materials to the storm drain culvert inlet and subsequently off-site. Although placed under cover, a second stockpile containing salt also had a straw wattle BMP improperly installed on the impervious ground surface (see Photographs 8 and 9). Straw wattle BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management.

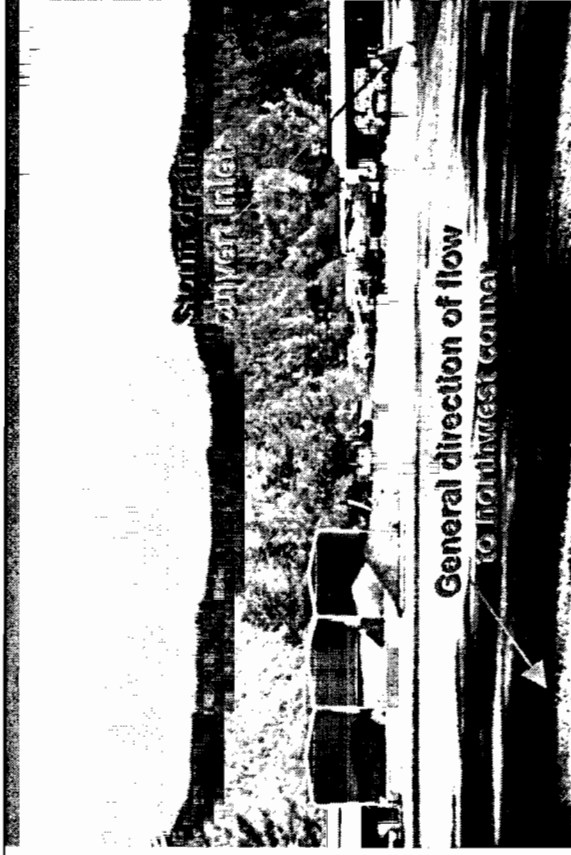
The facility has a dedicated area for storage of materials picked up from the highway system by maintenance crews. The area is segregated to provide an area for wood-based materials and another area for metal-based materials (see Photograph 10). According to the Highway Maintenance Supervisor, an engine block from an automobile had been deposited in the metal-bearing materials storage area earlier on day of the inspection (see Photograph 11). It appeared that the engine block still contained automotive fluids or petroleum products that had leaked onto the impervious ground surface in the storage area (see Photograph 11). The storage area is not covered and does not have a berm for containment. As a result, there was a potential for the contribution of pollutants to storm water runoff and the subsequent discharge of pollutants off-site.

Although the facility is equipped with a designated and covered vehicle and equipment wash rack, a bermed area toward the southern end of the facility is used for truck bed washing (see Photograph 12). An area of wet soil was observed on the backside of the bermed area adjacent to a drainage ditch that flows off-site to the south (see Photographs 13 and 14). As a result, there was a potential for the discharge of pollutants to the drainage ditch, a component of the Caltrans MS4, and subsequently off-site. Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states "when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out)."

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



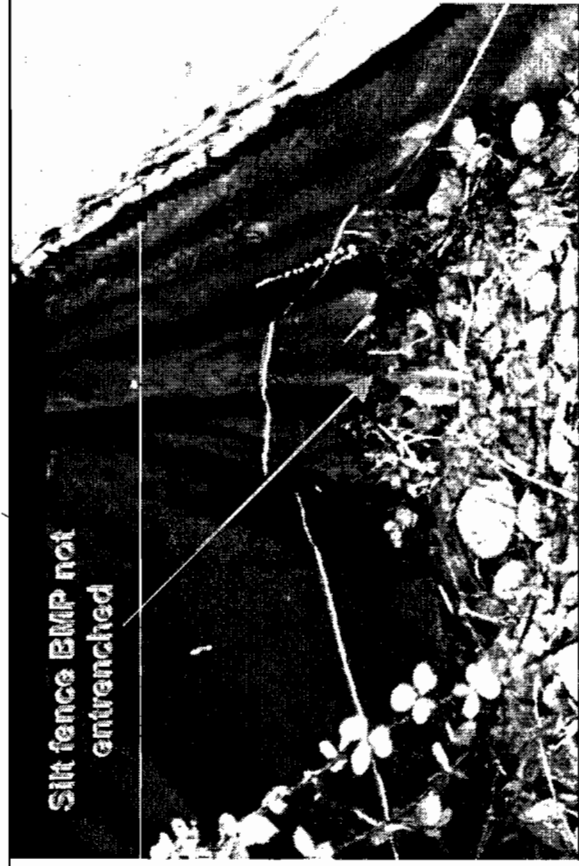
Photograph 1 – View from northwest corner of the facility



Photograph 3 – Culvert outlet to northwest corner of facility (Note: Silt fence BMP installed backwards)



Photograph 2 – Culvert Inlet that flows to northwest corner of facility



Photograph 4 – Closer view of silt fence BMP shown in Photograph 3

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



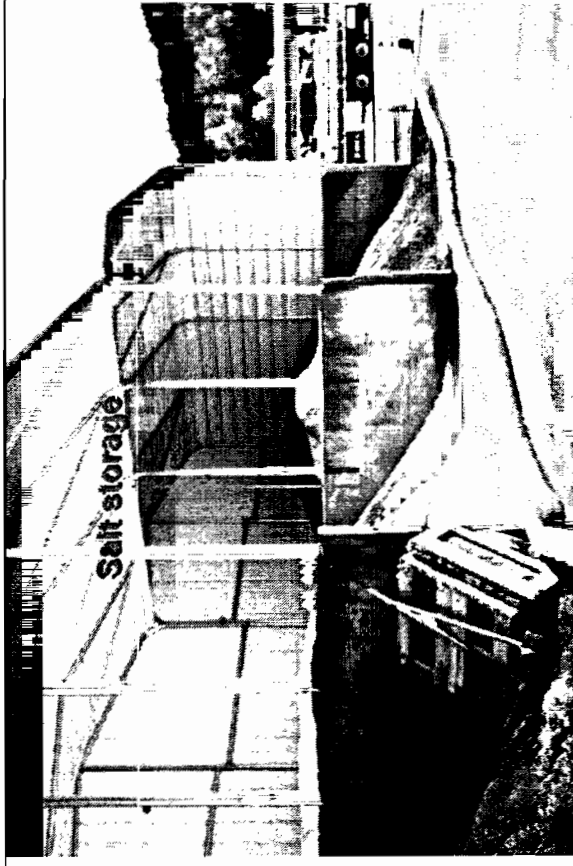
Photograph 5— Stockpile of sand and ash mixture up-gradient of Inlet



Photograph 6 – Inappropriate application of straw wattle BMP



Photograph 7— Closer view of straw wattle BMP around stockpile
(Note: Apparent salt residue)



Photograph 8 – Inappropriate application of straw wattle BMP

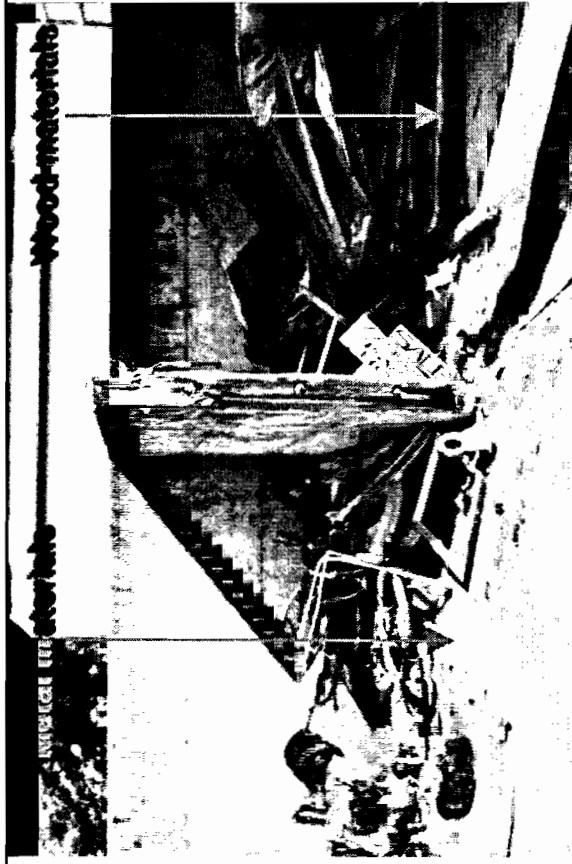
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 9— Closer view of straw wattles implemented at edge of covered storage area



Photograph 10 – Storage area for materials picked up from the highways
(Note: Area is uncovered and not bermed)



Photograph 11— Engine block stored in metal material storage area
(Note: Fluid on impervious ground surface)

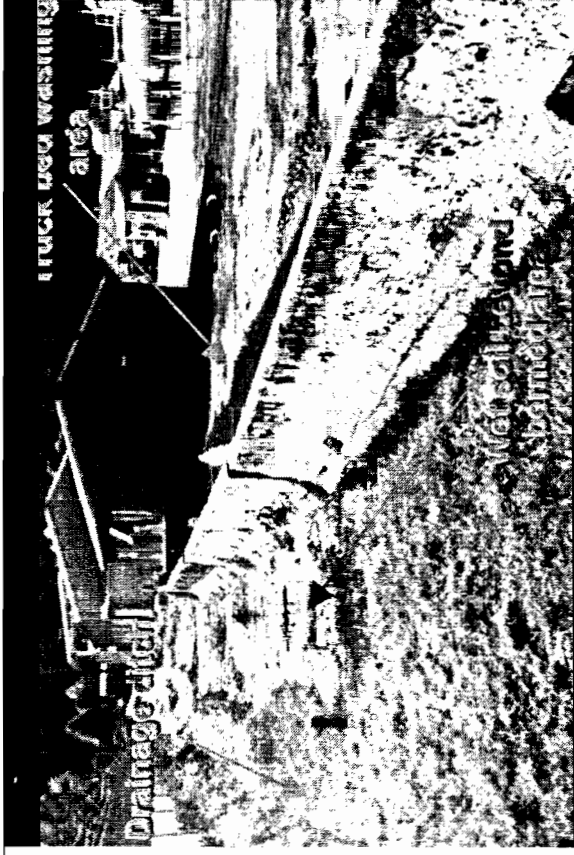


Photograph 12 – Bermed area used for truck bed washing

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 13 – Another view of area used for truck bed washing



Photograph 14 – View of drainage ditch along southern edge of facility

Site Visit No. 17

Washington Waste Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4**

The EPA Audit Team conducted a site visit at the Washington Waste Storage Site located near the Washington Boulevard exit along Highway 880 North in San Leandro, Alameda County, CA. Caltrans owns and operates this site for the temporary storage of waste picked up by its vector trucks, road sweepers, and road cleaning crews before the debris is loaded into a truck and hauled to a landfill for final disposal ([see Photograph 1](#)).

Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Solid and liquid waste from Caltrans’ vector trucks is deposited into an excavated area for dewatering prior to the debris being hauled off-site for disposal ([see Photograph 2](#)). Vector, sweeper, and roadway waste are potential pollutant sources. Although the site itself is permanent, a facility pollution prevention plan (FPPP) had not been developed for the Washington Waste Storage Site.

Furthermore, coverage and containment BMPs had not been implemented for the sweeper and roadway waste stockpiles and there was a potential for the contribution of pollutants to storm water runoff ([see Photographs 1, 3, and 4](#)). Due to the lack of coverage and containment BMPs, fugitive trash and other debris was not maintained as part of the original stockpile and had been strewn across the site ([see Photographs 4 and 5](#)). A Caltrans roadway maintenance supervisor from the San Leandro Maintenance Yard stated that the debris deposited at the waste storage site is generally stored for about 90 days before a contracted hauling company removes the material and disposes of it at a nearby landfill. A Caltrans staff member explained that BMPs had not yet been implemented at the site because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the waste stockpiles on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide. The EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In recognition of this issue, Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.”

Despite the availability of a designated wash area at the nearby San Leandro Maintenance Yard, a road sweeper pre-washing area was observed along the fenceline of the facility. The pre-washing area is not equipped to properly capture, treat, re-use, or dispose of vehicle wash water and associated pollutants ([see Photographs 6 and 7](#)). As explained by a Caltrans roadway maintenance supervisor from the San Leandro Maintenance Yard, road sweepers are hosed off at the Washington Temporary Storage Site at the end of a working day before they return to the San Leandro Maintenance Yard to be cleaned in the facility’s dedicated wash area. The maintenance supervisor added that this practice is performed to remove large waste from the sweeper before it is in the wash area, so the trough drain at the maintenance yard does not fill up as quickly. It was

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4**

also explained that the waste removed from this trough drain at the San Leandro Maintenance Yard is hauled off-site for disposal as hazardous waste. The maintenance supervisor also stated that the roadway maintenance staff had not received specific training on where and how to clean the road sweepers at the Washington Temporary Storage Site, and Caltrans does not have written procedures that describe this specific process.

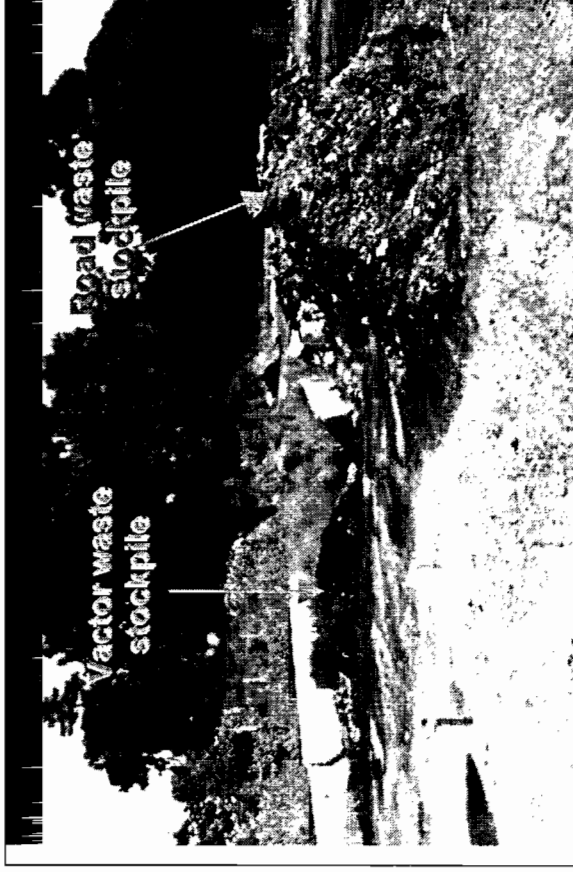
The EPA Audit Team reviewed Appendix D of the Caltrans SWMP and found that it does not provide appropriate BMPs for washing road sweepers. Specifically, Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).”

In summary, the pre-washing area is not equipped to properly capture, treat, re-use, or dispose of sweeper wash water and associated pollutants, and the practice of pre-washing may lead to pollutant contributions to storm water runoff.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4

Photograph date: 10/07/2009



Photograph 1 – Waste stockpiles at the facility



Photograph 2 – Close-up view of excavated vector waste dump site at the facility



Photograph 3 – Lack of BMPs for containment or coverage of road waste stockpiles



Photograph 4 – View of waste stockpiles and proximity to fence line

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4

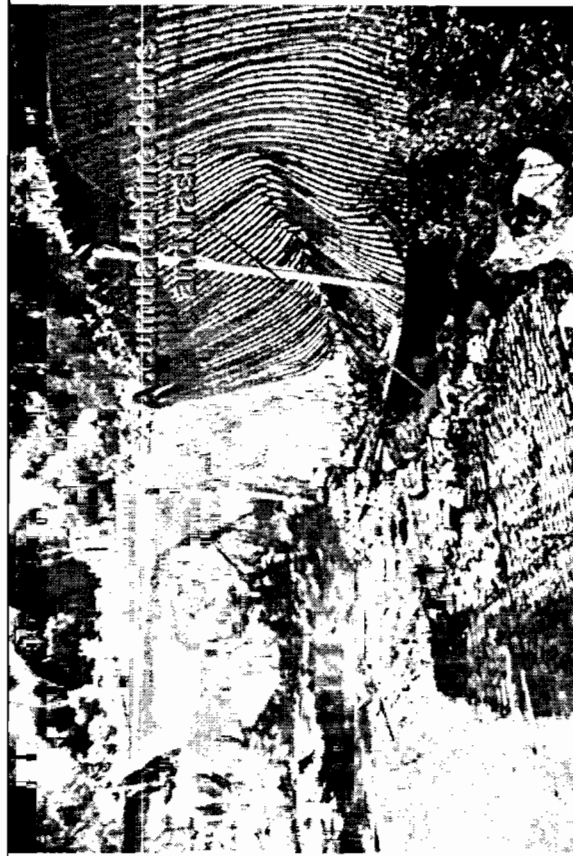
Photograph date: 10/07/2009



Photograph 5 – Example of fugitive trash and debris



Photograph 6 – Location of road sweeper pre-washing area



Photograph 7 – View of site boundary down-gradient of road sweeper pre-washing area

Site Visit No. 18

Livorna Waste Storage Site

Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Livorna Waste Storage Site
Caltrans District 4**


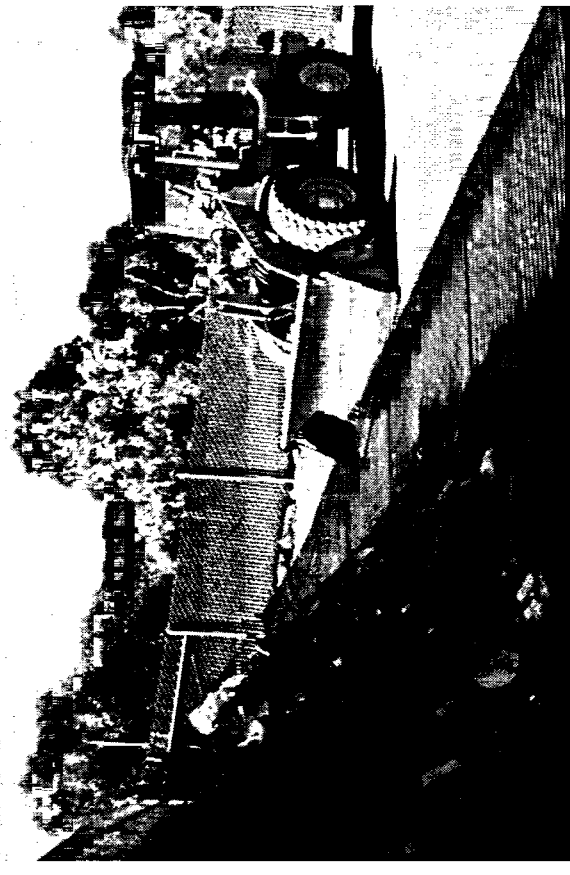
The EPA Audit Team conducted a site visit at the Livorna Waste Storage Site located at approximately post mile 10 along Highway 680 North near the Livorna exit in Contra Costa County, CA. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Although the site itself is permanent, a facility pollution prevention plan (FPPP) has not been developed for the Livorna Waste Storage Site.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans owns and operates this site for the temporary storage of waste picked up by its road sweepers and road cleaning crews before the debris is loaded into a truck and hauled to the nearest landfill for disposal. As explained by Caltrans staff, waste is temporarily stored at the site so that the road sweepers do not have to drive the 10–20 mile distance to the landfill each time the sweeper capacity is filled.

Furthermore, coverage and containment BMPs had not been implemented for a sweeper and roadway waste stockpile at the Livorna Waste Storage site and there was a potential for the contribution of pollutants to storm water runoff (see Photographs 1 and 2). Specifically, the ground surface appeared to be sloped toward the impervious roadway entrance/exit to the waste storage site. A Caltrans staff member explained that BMPs had not yet been implemented at the site because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the debris pile on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In addition, the EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Livorna Waste Storage Site Caltrans District 4</p>	<p>Photograph date: 10/07/2009</p>
--------------------------------	--	------------------------------------

	<p>Photograph 1 – Entrance to temporary storage site. (Note: Impervious roadway entrance and tracking of debris)</p>		<p>Photograph 2 – Waste from road sweeping and other road cleaning activities</p>
---	--	--	---

Site Visit No. 19

Schaefer Ranch Waste Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Schaefer Ranch Waste Storage Site
Caltrans District 4**

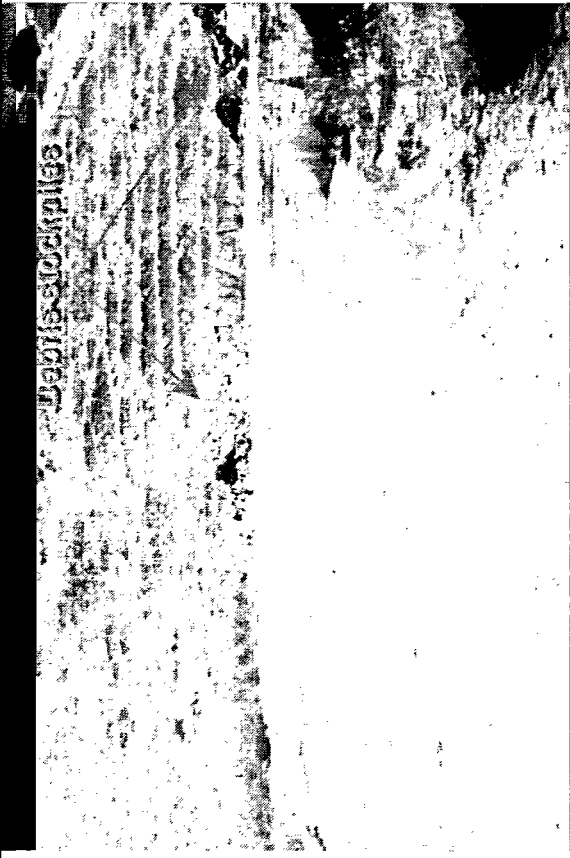



The EPA Audit Team conducted a site visit at the Schaefer Ranch Waste Storage Site located at approximately post mile 25 along Highway 580 West in Alameda County, CA. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Although the site itself is permanent, a facility pollution prevention plan (FPPP) had not been developed for the Schaefer Ranch Waste Storage Site.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans owns and operates this site for the temporary storage of waste collected by its road sweepers and road cleaning crews before the debris is loaded into a truck and hauled to a landfill for final disposal (see Photographs 1 and 2).

Additionally, coverage and containment BMPs had not been implemented for a sweeper and roadway waste stockpile at the Schaefer Ranch Waste Storage site and there was a potential for the contribution of pollutants to storm water runoff (see Photographs 3, 4, and 5). Specifically, the EPA Audit Team observed a culvert in the northwestern part of the site which a Caltrans staff member stated is connected to Caltrans’ storm water conveyance system (see Photograph 6). An unmaintained, collapsed silt fence BMP was observed up-gradient of the culvert inlet (see Photograph 7). A Caltrans staff member explained that perimeter control BMPs had not yet been implemented for the stockpile because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the debris pile on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In addition, the EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

<h1>Site Photographs</h1>	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Schaefer Ranch Waste Storage Site Caltrans District 4	Photograph date: 10/07/2009
---------------------------	--	-----------------------------

	
	
<p>Photograph 3 – Close-up view of debris stockpile from road sweeping and other road cleaning activity</p>	<p>Photograph 4 – Close-up view of debris in stockpile pictured in Photograph 3. The metal cans appeared to contain a liquid milk substance.</p>

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Schaefer Ranch Waste Storage Site
Caltrans District 4

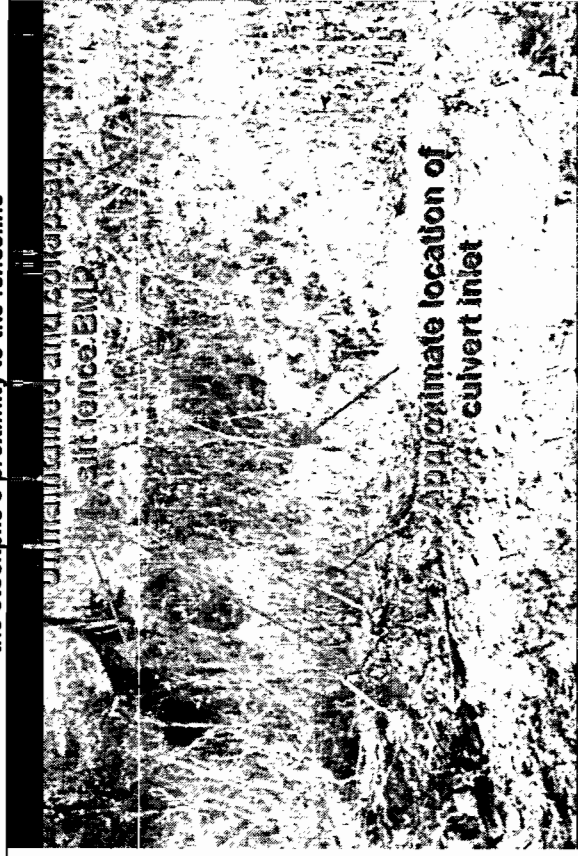
Photograph date: 10/07/2009



Photograph 5 – Note lack of BMPs for containment around stockpile and the stockpile's proximity to the fence line



Photograph 6 – Location of culvert inlet in the northwestern portion of the waste storage site



Photograph 7 – Location of culvert inlet and unmaintained and collapsed silt fence BMP up-gradient of inlet

Site Visit No. 20

Marysville Maintenance Facility

Site Visit Date: 10/7/2009

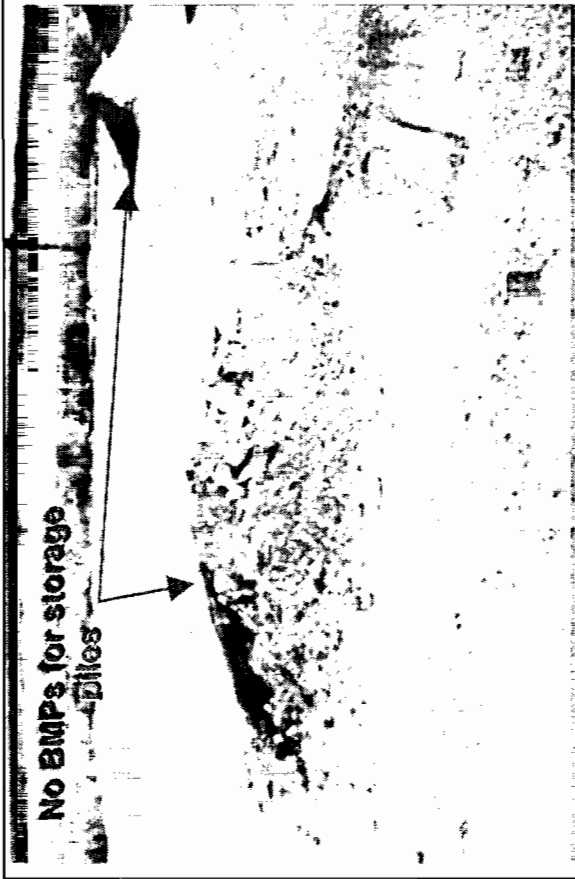
**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Marysville Maintenance Facility
Caltrans District 3**

The EPA Audit Team conducted a site visit at the Marysville Maintenance Facility located at 1001 North Beale Road, Marysville, CA. Caltrans owns and operates the maintenance yard to house equipment and activities for a roadway maintenance crew.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site... There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans Maintenance operates this site for the temporary storage of debris picked up by its road sweepers, before the waste is hauled to the nearest landfill for disposal.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Coverage and containment BMPs had not been implemented for a sweeper waste stockpile in the northwest portion of the facility (see Photograph 1). Although straw wattles had been installed along the perimeter of the maintenance yard, the straw wattles were not properly installed or maintained. Specifically, the straw wattles utilized along the northwestern perimeter of site, adjacent to the FEMA Ditch Project, were not properly entrenched or anchored (see Photographs 2 and 3). Additionally, straw wattles utilized at the storm drain inlets at the southern perimeter of site were installed on an impervious surface and, therefore, were not properly entrenched or anchored to create an adequate seal (see Photographs 4 and 5).

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Marysville Maintenance Facility District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	--	-----------------------------------



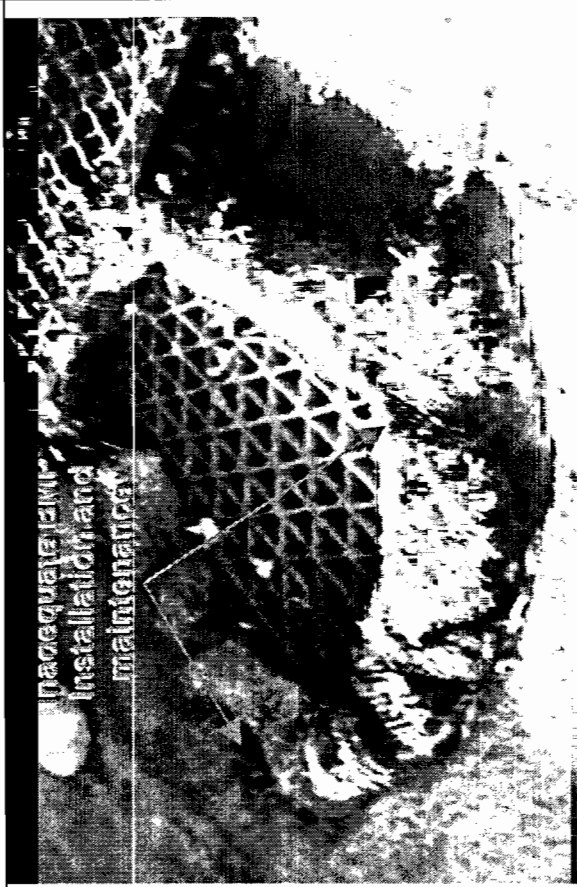
Photograph 1 – View of sweeper waste storage pile at the Marysville Maintenance Station



Photograph 3 – Close up view of straw wattle installation shown in Photograph 2



Photograph 2 – View of straw wattle BMPs, not adequately installed



Photograph 4 – Storm drain inlet on the east side of the Marysville Maintenance Station office building

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Marysville Maintenance Facility District 3</p>	<p>Photograph date: 10/7/2009</p>
--------------------------------	--	-----------------------------------



Site Visit No. 21

**Bracut Highway Maintenance Facility
Site Visit Date: 10/22/2009**

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Bracut Highway Maintenance Facility located at 6100 North Highway 101 in Eureka, CA 95503. The Washington Gulch waterway is located approximately 1000 feet east of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Although the facility is equipped with a designated and covered vehicle and equipment wash rack (see Photographs 1 and 2), an area in the northwest corner of the facility and directly adjacent to two storm drain inlets was used for road sweeper washing activities (see Photograph 3). The Highway Maintenance Supervisor at the facility explained that the area was actively used for road sweeper washing because the pressure washing equipment in the dedicated wash rack did not provide enough pressure to effectively conduct the cleaning operation.

The road sweeper washing area was not equipped to properly capture, treat, re-use, or dispose of road sweeper wash water and associated pollutants. Collected road sweepings contain fine pollutant particles and non-visible pollutants. Although BMPs had been installed, any wash water and associated pollutants passing through the BMPs and subsequently entering the MS4 would be considered an illicit discharge. The BMPs implemented for the road sweeper washing area are described in the following paragraphs.

Filter fabric had been installed in one of the adjacent storm drain inlets and absorbent booms had been placed around the other inlet (see Photographs 4 and 5). However, the BMPs implemented for inlet protection were not properly maintained and significant pollutant accumulation was observed around the inlets. Furthermore, sand bags containing debris had been used for weights on top of the absorbent booms placed around one of the storm drain inlets, and several of the bags were no longer securely closed (see Photograph 6).

Although storm drain inlets at the facility were equipped with filters, evidence of pollutant accumulation was observed within one of the storm drain inlets near the road sweeper washing area (see Photograph 7), which indicated that an unknown quantity of sweeper wash water had been discharged to the MS4. The discharge location of the storm drain inlets associated with the road sweeper washing area was unclear. Prohibition A.7 of the Permit states “wastes or wastewater from road sweeping vehicles or from other maintenance or construction activities shall not be discharged to any surface waters or to any storm drain leading to surface water bodies.”


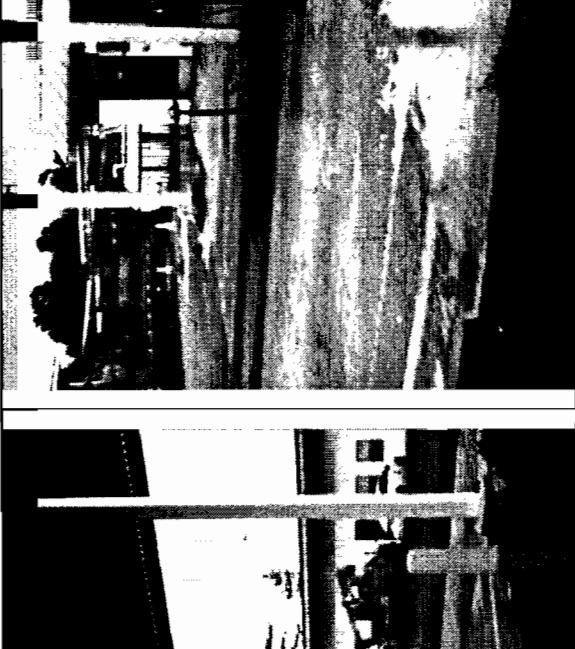
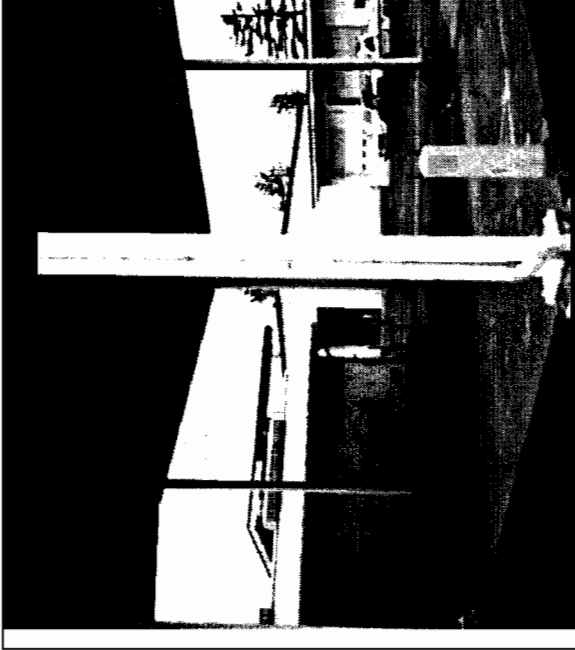

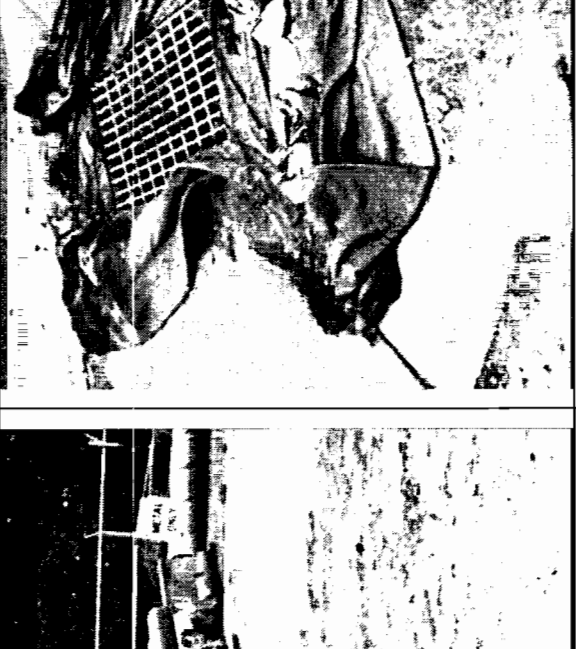
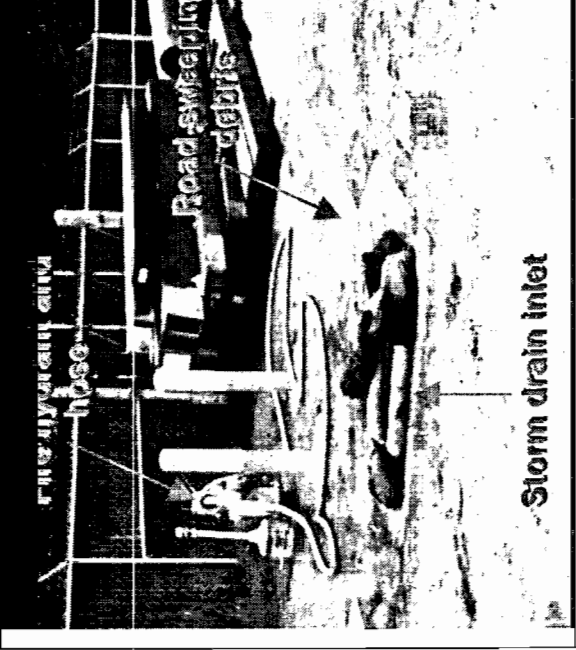
Additional storm drain inlet filters at the facility (see Photograph 8) did not appear to have been recently cleaned or maintained and debris accumulation was observed in the filter units and inlets (see Photograph 9). It was not clear when maintenance had been last performed on the filters.

In a separate location along the eastern edge of the facility, a stockpile of gravel and sediment did not have properly selected and implemented BMPs for stockpile management (see Photograph 10). Specifically, the stockpile was only partially covered and perimeter controls had only been implemented around a portion of the stockpile. Furthermore, absorbent booms are not intended to be used on impervious surfaces as sediment control.

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1**

Two containers of a cleaning agent were improperly stored adjacent to a concrete drainage swale and leaking hose along the eastern side of the facility (see Photograph 11). The containers were not stored within secondary containment, and as a result, there was a potential for the contribution of wash water and pollutants to storm water runoff, and subsequently to a down-gradient storm drain inlet (see Photograph 12).

In summary, the observed washing areas in the northwest corner and eastern side of the facility were not equipped to properly capture, treat, re-use, or dispose of wash water and associated pollutants, and the practice of washing may therefore lead to pollutant contributions to storm water runoff.

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Bracut Highway Maintenance Facility Caltrans District 1	Photograph date: 10/22/2009
		
<p>Photograph 1 – Covered wash rack</p>	<p>Photograph 2 – Another view of covered wash rack</p>	<p>Photograph 3 – Area in northwest corner of facility used for road sweeper washing. (Note: Pollutant accumulation around storm drain inlet)</p>
		
<p>Photograph 4 – Second storm drain inlet near road sweeper washing area. Inlet is just out of the picture to the bottom left of Photograph 3.</p>	<p>Photograph 5 – Filter fabric BMP</p>	<p>Photograph 6 – Filter fabric BMP</p>

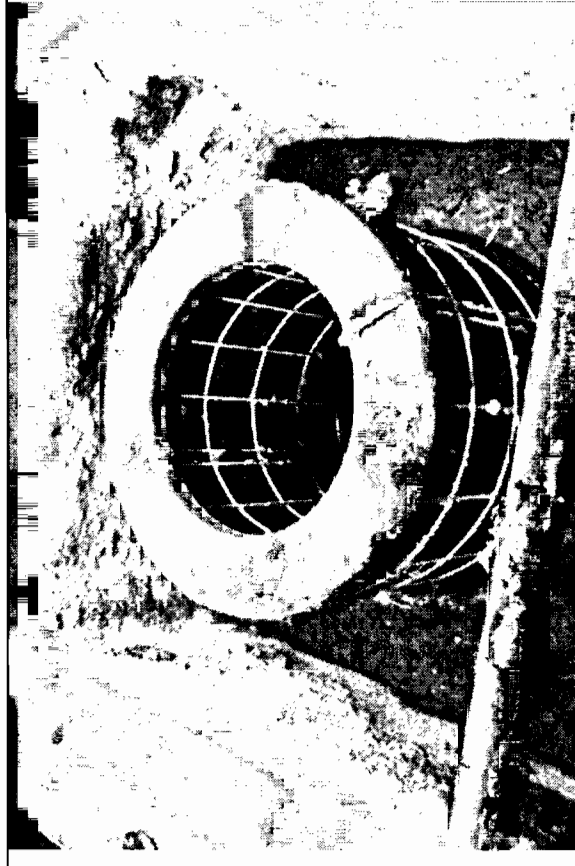
<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Bracut Highway Maintenance Facility Caltrans District 1</p>	<p>Photograph date: 10/22/2009</p>
--------------------------------	---	------------------------------------

 <p>Absorbent boom</p>	 <p>Photograph 6 – View of debris contained in bags used for securing absorbent booms</p>
 <p>Pollutant accumulation</p>	 <p>Filters</p>
<p>Photograph 7— View into storm drain inlet shown in Photographs 3, 5 & 6</p>	<p>Photograph 8 – View into another storm drain inlet at the facility</p>

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1

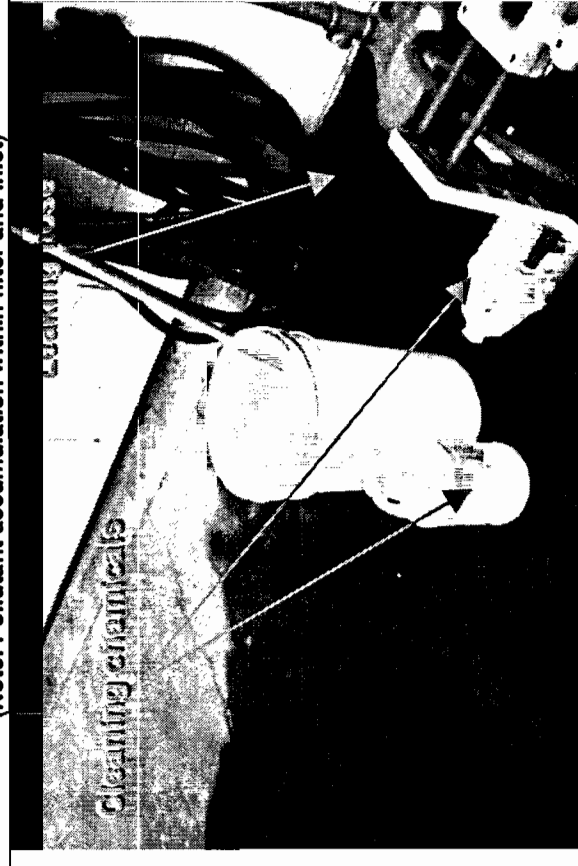
Photograph date: 10/22/2009



Photograph 9— Closer view of filter shown in Photograph 8.
(Note: Pollutant accumulation within filter and inlet)



Photograph 10 - Partially covered and contained stockpile along eastern edge of facility



Photograph 11— Cleaning/washing chemicals stored on impervious ground surface adjacent to leaking hose



Photograph 12— View from down-gradient storm drain inlet to location of hose and chemical containers pictured in Photograph 11

Site Visit No. 22

Garberville Highway Maintenance Facility
Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Garberville Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Garberville Highway Maintenance Facility located on Redwood Drive in Garberville, CA 95542. The South Fork Eel River is located approximately 500 feet west of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Although the facility is equipped with a designated and covered vehicle and equipment wash rack (see Photographs 1 and 2), an overflow for the wash rack sump was observed. The overflow outlets to a drainage ditch leading toward the South Fork Eel River (see Photographs 3 and 4). The Caltrans Maintenance Supervisor indicated that the overflow does not discharge because the wash rack is now covered. However, Caltrans staff could not provide site plans at the time of the site visit or otherwise demonstrate whether the overflow has been plugged, or whether the wash rack is appropriately connected to the sanitary sewer.

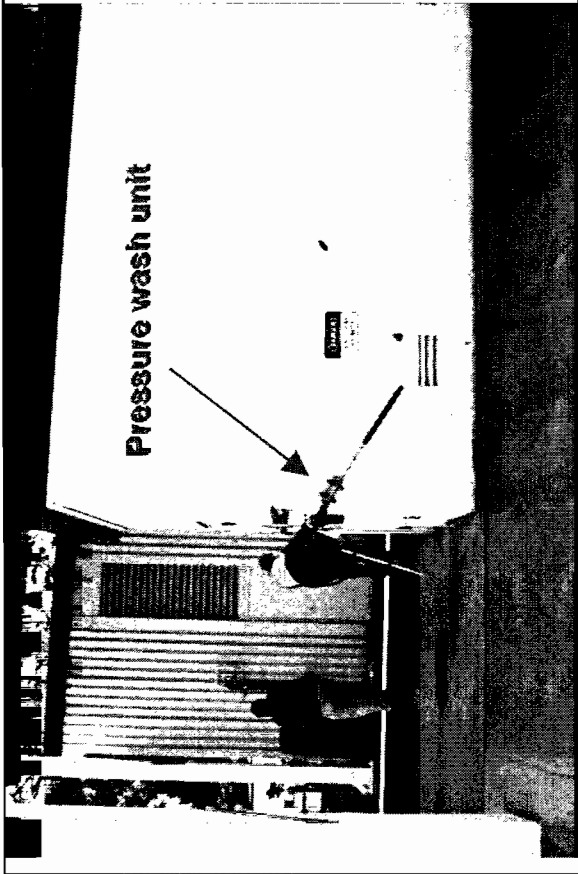
Despite the availability of the designated wash rack, a vehicle pre-washing area was observed in the lower yard (see Photograph 5). The lower yard is located west of the main office and maintenance facility, in much closer proximity to the South Fork Eel River. The pre-washing area is not equipped to properly capture, treat, re-use, or dispose of vehicle wash water and associated pollutants. Additionally, a berm installed down-gradient of the vehicle pre-washing area showed signs of standing water and had been damaged (see Photographs 6 and 7).

Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).” The Caltrans Maintenance Supervisor explained that the area is used for pre-washing trucks and other vehicles prior to using the designated wash rack. The practice of pre-washing is not fully consistent with the Caltrans SWMP and may lead to pollutant contributions or an illicit discharge.

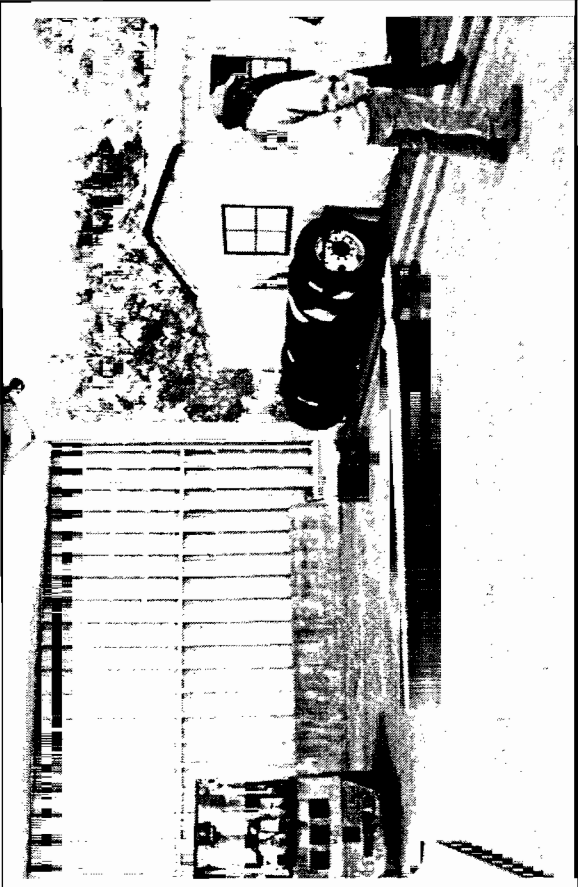
In addition, straw wattle BMPs used for stockpile management were improperly installed on impervious surfaces throughout the facility and were not properly entrenched in the ground to retain the stockpiled materials (see Photographs 8 and 9). Although located under cover, a second stockpile area containing salt also had a straw wattle BMP improperly installed on an impervious surface (see Photograph 9). Furthermore, straw wattle BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management.

Outlet protection and flow dissipation BMPs were not in place below a drainage pipe leading from the facility (see Photograph 10). As a result, there was a potential for erosion and scouring at the pipe outlet leading to the South Fork Eel River (see Photographs 11 and 12).

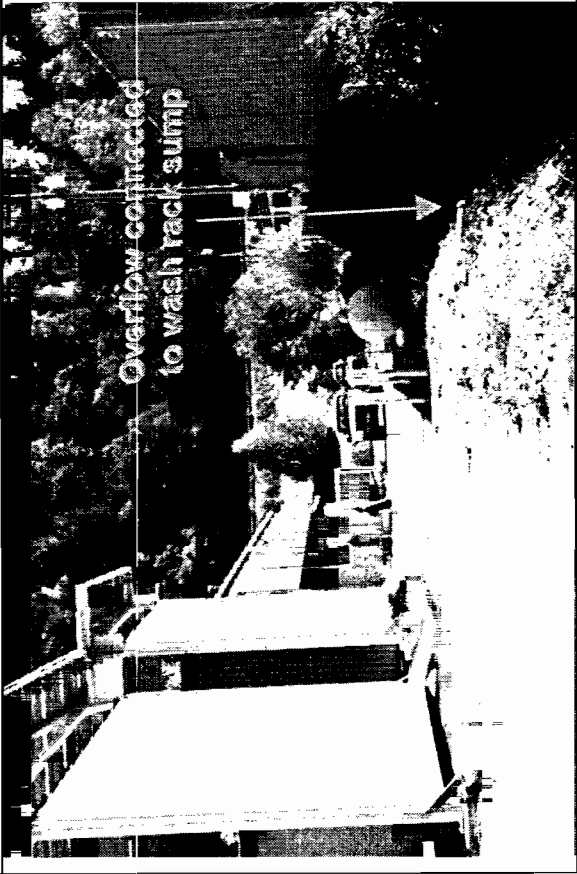
<h1>Site Photographs</h1>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Garberville Highway Maintenance Facility Caltrans District 1</p>	<p>Photograph date: 10/22/2009</p>
---------------------------	--	------------------------------------



Photograph 1 – Covered wash rack



Photograph 2 – Covered wash rack



Photograph 3 – Sump overflow leading to drainage ditch



Photograph 4 – View of drainage ditch leading toward South Fork Eel River

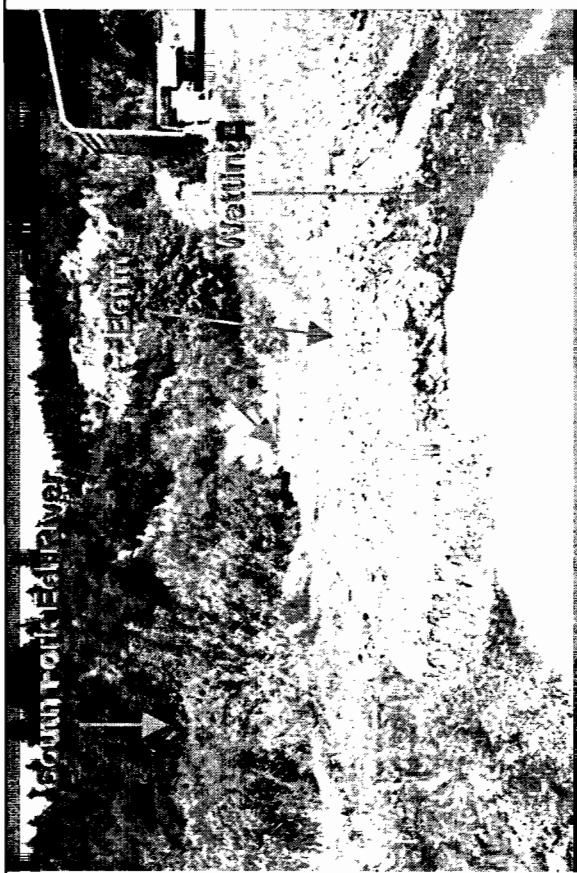
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Garberville Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 5— Vehicle pre-washing area in the lower yard






Photograph 6 – View down-gradient of pre-washing area



Photograph 7— Damaged berm shown in Photograph 6



Photograph 8 – Inappropriate application of wattles on impervious surface

Site Photographs	Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Garberville Highway Maintenance Facility Caltrans District 1	Photograph date: 10/22/2009
		Photograph 10 – Facility outfall
		Photograph 12— Proximity of outlet to receiving water
Photograph 11— Outlet pipe down-gradient of facility outfall		

Site Visit No. 23

Berry Summit Sand Storage Facility
Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Berry Summit Sand Storage Facility located at post mile 34.1 Highway 299, Willow Creek, CA. The facility is located approximately 250 feet west of Willow Creek.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A stockpile of roadway abrasives was stored on the impervious ground surface up-gradient of a storm drain inlet in the northern corner of the facility (see Photographs 1, 2 and 3). BMPs were not implemented for coverage or containment of the stockpile. As explained by a Caltrans staff member, the storm drain inlet is equipped with an enlarged catch basin area to allow sand particles to settle prior to discharge; however, based on conversations with Caltrans staff, it did not appear that there was an established frequency for regular cleaning and maintenance of the inlet. Absorbent boom BMPs had been placed around a portion of the storm drain inlet (see Photograph 2); however, the BMPs were not fully protective of the inlet and absorbent boom BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management and there was a potential for the discharge of pollutants off-site.

In addition, a 10 to 20 foot section of the berm along the northern perimeter of the site was not intact and accumulated roadway abrasives were observed adjacent to the failed berm (see Photograph 4). Roadway abrasives were also observed on the impervious ground surface in other various areas at the facility and beyond the perimeter fenceline (see Photographs 5, 6 and 7). As a result, there was a discharge of pollutants beyond the bermed perimeter, and the potential for subsequent off-site discharge.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1

Photograph date: 10/22/2009



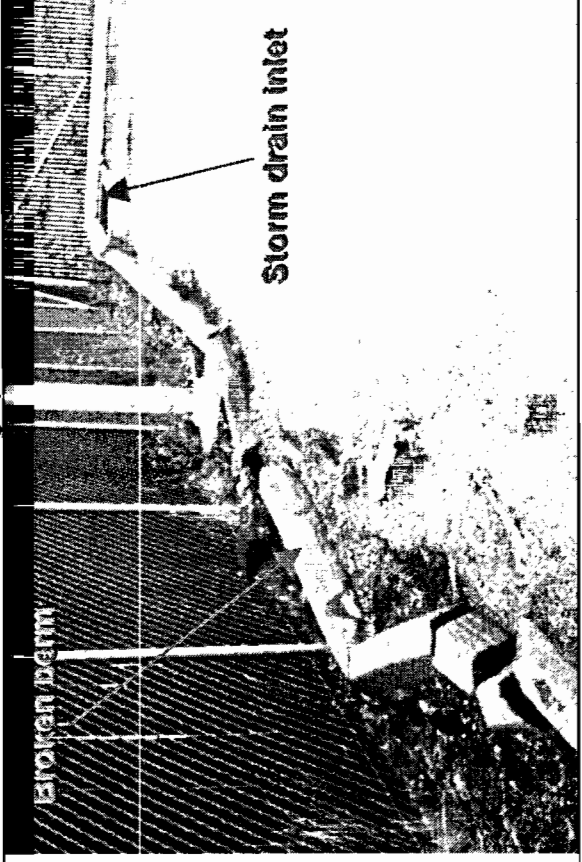
Photograph 1 – Stockpile without BMPs for coverage or containment



Photograph 2 – View of storm drain inlet and stockpile shown in Photograph 1



Photograph 3 – Discharge location from inlet shown in Photograph 2



Photograph 4 – Broken berm along northern perimeter of facility
(Note: Accumulation of roadway abrasives adjacent to berm)

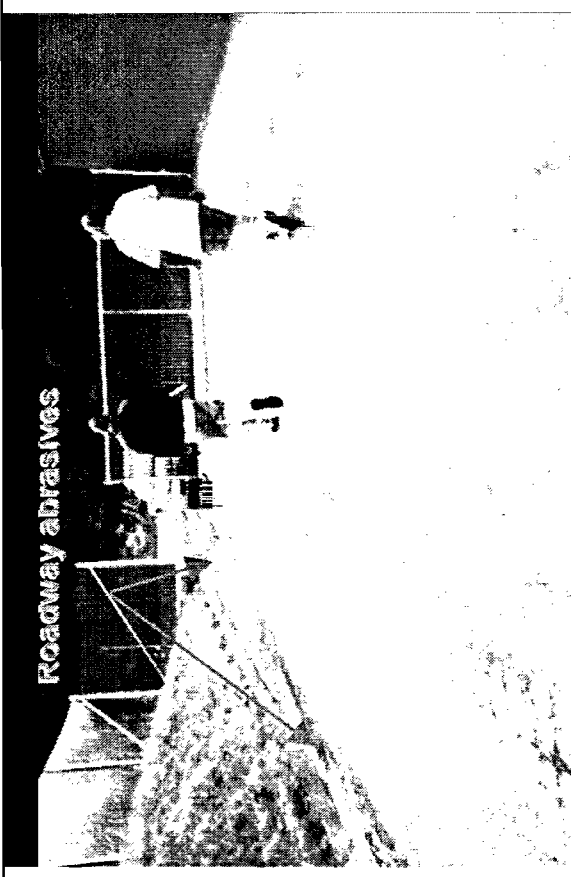
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1

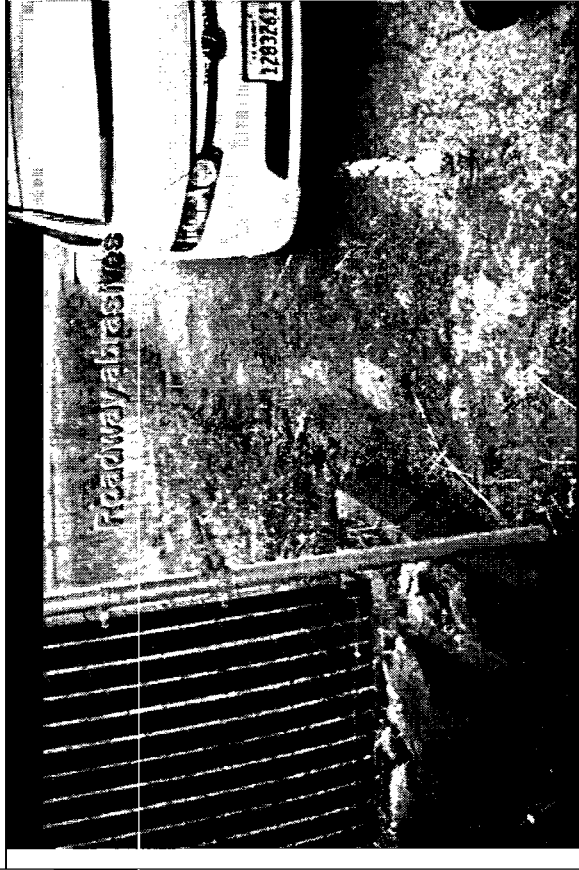
Photograph date: 10/22/2009



Photograph 5— Roadway abrasives on impervious ground surface



Photograph 6 – Roadway abrasives on impervious ground surface



Photograph 7— Roadway abrasives outside facility entrance

Site Visit No. 24

Crescent City Highway Maintenance Facility
Site Visit Date: 10/21/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1**


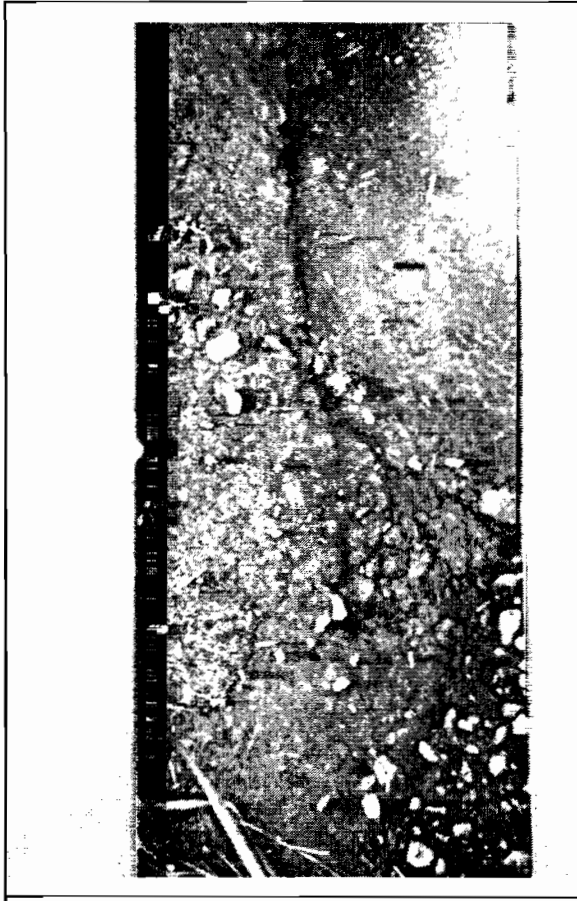
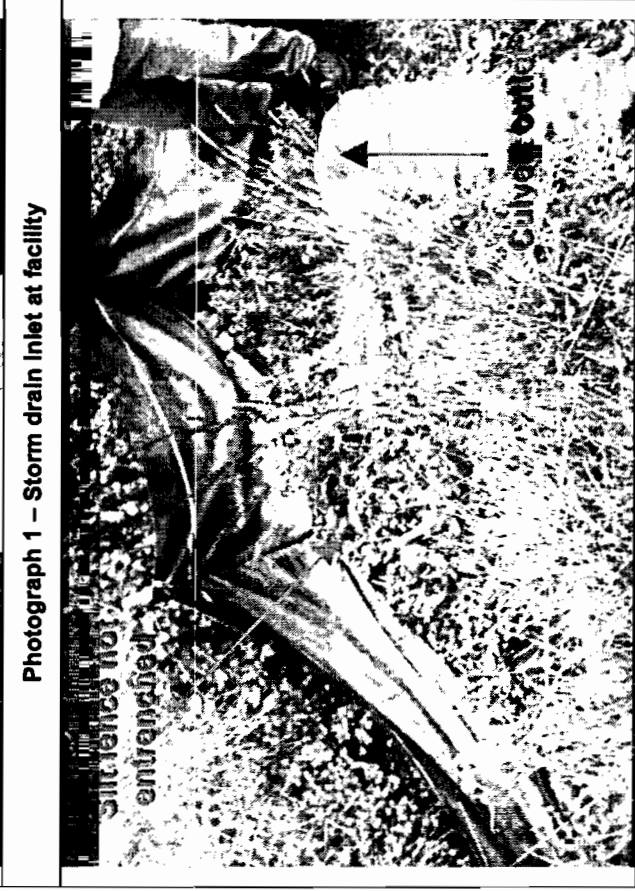

The EPA Audit Team conducted a site visit at the Crescent City Highway Maintenance Facility located at 711 North Highway 101 in Crescent City, CA 95531. Elk Creek is located approximately 0.75 miles east of the facility and the Pacific Ocean is about 1 mile to the south and southwest.

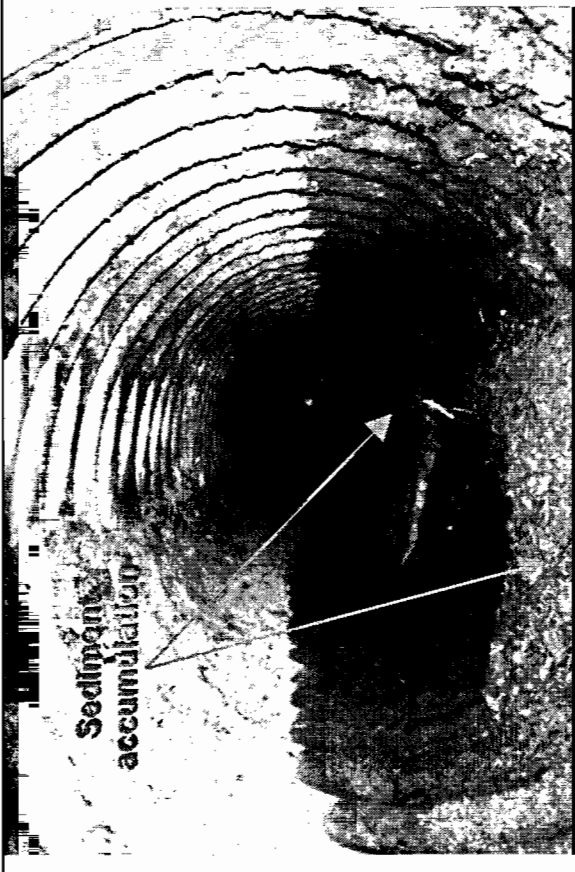
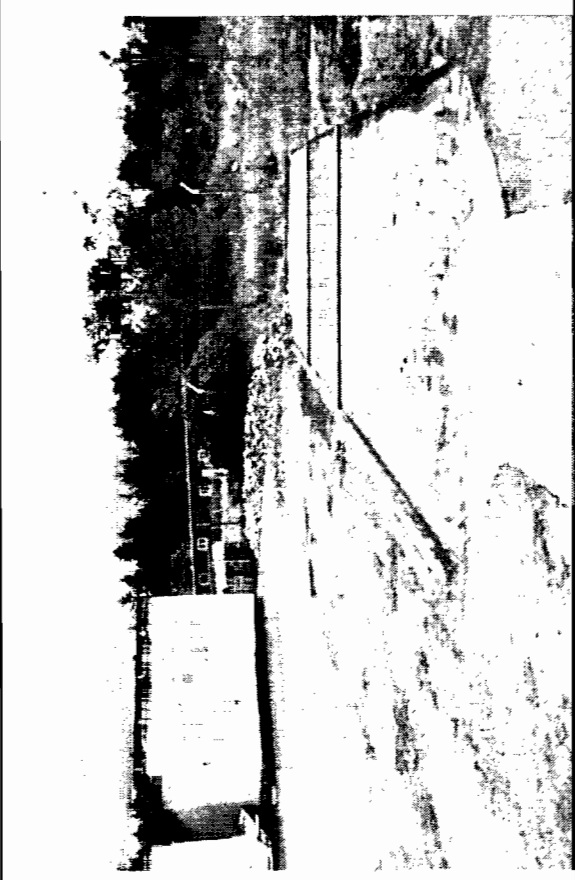

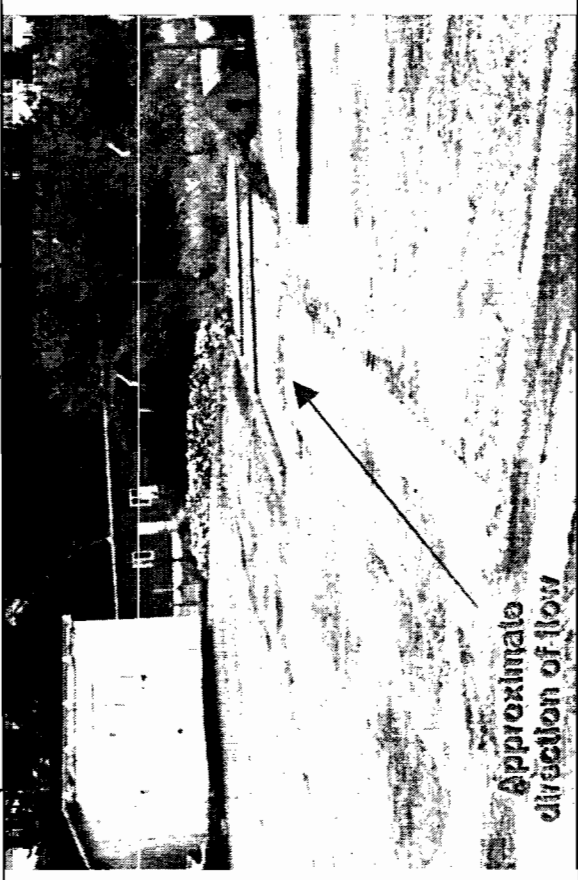
Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A significant amount of sediment accumulation was observed within a storm drain inlet at the facility that did not appear to have been recently cleaned (see Photographs 1 and 2). As explained by the Highway Maintenance Supervisor, storm drain inlets at the facility flow to the drainage ditch in the southeast corner of the facility (see Photograph 3). He added that storm water runoff does not generally discharge off-site from this location but rather ponds and remains as standing water until it infiltrates into the ground. Nonetheless, evidence of sediment discharged to the drainage ditch as well as sediment accumulation within the culvert pipe that discharges to the southeast corner of the facility was observed (see Photograph 5). Furthermore, a silt fence BMP had been installed in the flow pathway of the culvert outlet and was not entrenched into the ground to retain sediment and prevent failure (see Photograph 3).

In addition, a significant amount of sediment accumulation was observed on the impervious ground surface near the southeast corner of the facility (see Photographs 6 and 7). As explained by the Highway Maintenance Supervisor, the area was used as a temporary stockpile location for washout material from front loaders and dump trucks. Whether the equipment washout operation was conducted with dry or wet processes was unclear. Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).” It should also be noted that the stockpile area was located directly in the flow pathway of the surface drainage system at the facility (see Photograph 8). As a result, there was a potential for the discharge of sediment and other pollutants to the drainage ditch along the southern edge of the facility (see Photograph 9).

In addition, straw wattle BMPs used for stockpile management were improperly installed on impervious surfaces at the facility, and therefore were not properly entrenched in the ground to retain the stockpiled materials (see Photograph 10).

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Crescent City Highway Maintenance Facility Caltrans District 1</p>	<p>Photograph date: 10/21/2009</p>
--------------------------------	--	------------------------------------

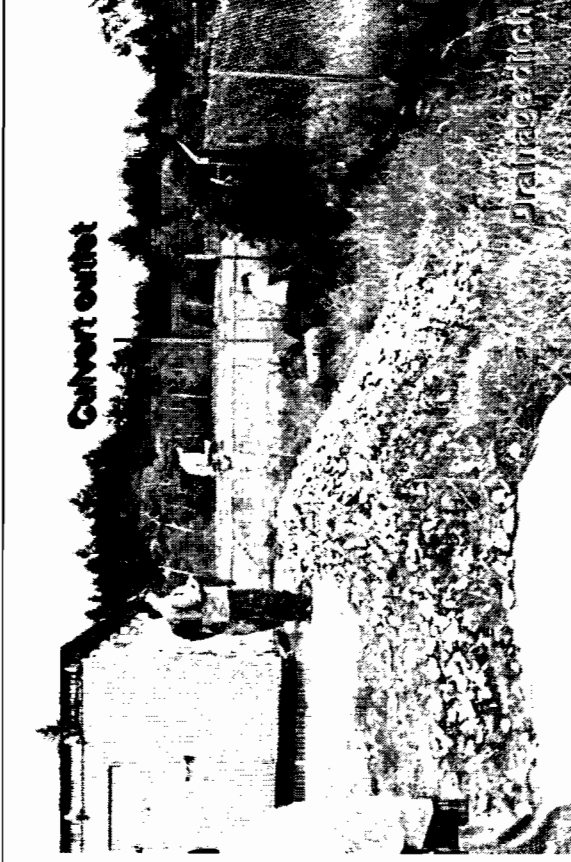
	
<p>Photograph 1 – Storm drain Inlet at facility</p> 	<p>Photograph 2 – View into storm drain inlet pictured in Photograph 1 (Note: Sediment accumulation within inlet)</p> 
<p>Photograph 3 – Storm drain outlet to drainage ditch in southeast corner of facility</p>	<p>Photograph 4 – Closer view of silt fence BMP shown in Photograph 3</p>

<div>Site Photographs</div>	<div>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Crescent City Highway Maintenance Facility Caltrans District 1</div>	<div>Photograph date: 10/21/2009</div>
<div></div> <div>Photograph 5— View into storm drain pipe from outlet</div>	<div></div> <div>Photograph 6 – Area used for stockpiling washout material (Note: Sediment accumulation on impervious ground surface)</div>	
<div></div> <div>Photograph 7— Closer view of sediment accumulation on impervious ground surface</div>	<div></div> <div>Photograph 8 – View of surface drainage system through stockpile area</div>	

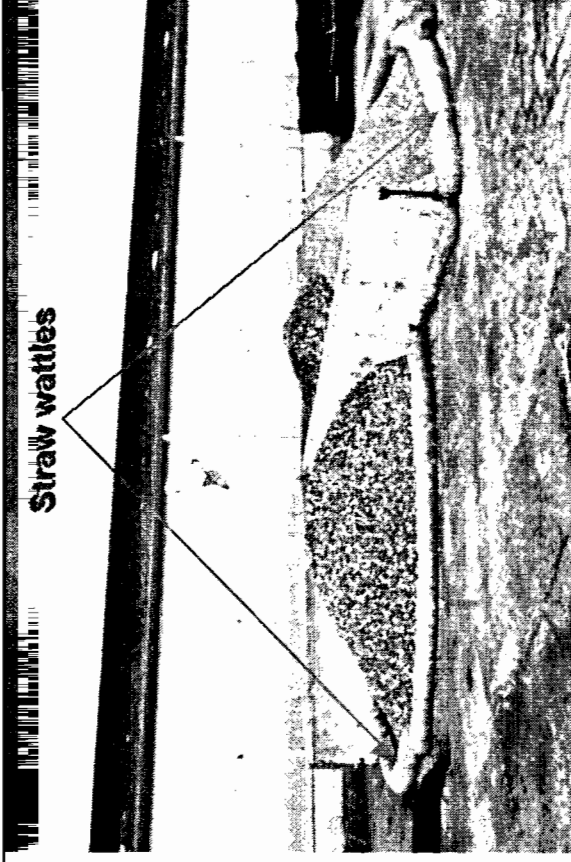
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/21/2009



Photograph 9— View of drainage ditch and storm drain system culvert outlet



Photograph 10 – Inappropriate application of wattles on impervious surface

Site Visit No. 25

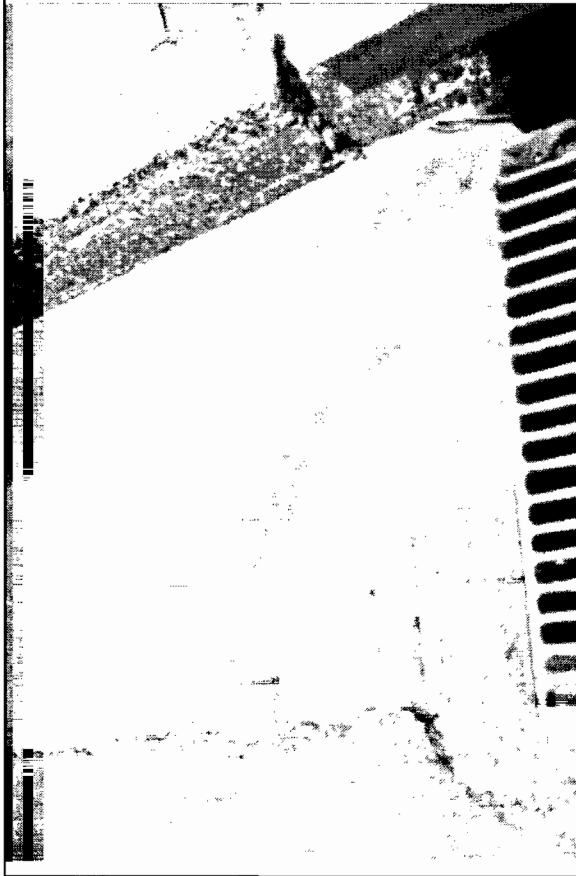
Obrien Rest Area
Site Visit Date: 10/13/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Obrien Rest Area
Caltrans District 2**

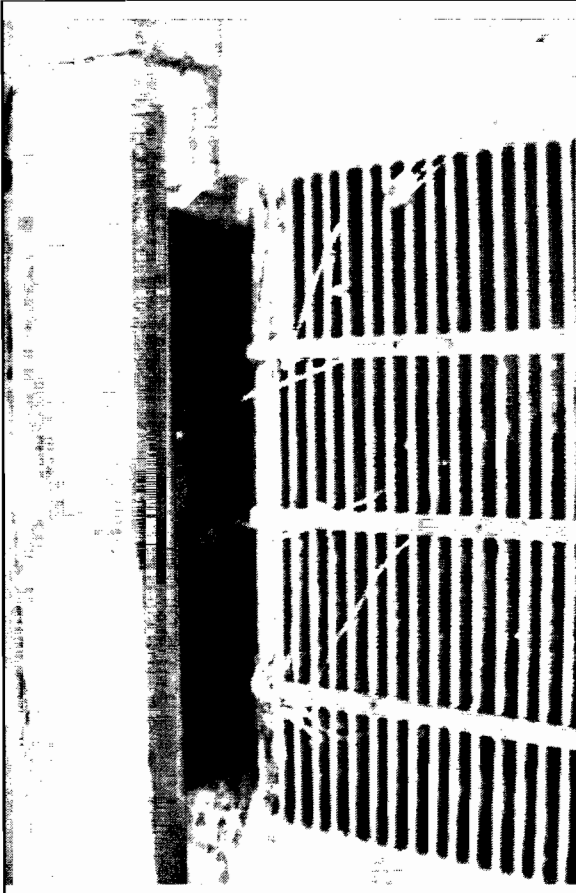
The EPA Audit Team conducted a site visit at the Obrien Rest Area located along Interstate 5 north of Redding, CA adjacent to Shasta Lake in Shasta County, CA.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A visible sheen was observed flowing into the storm drain located along the curb and gutter line of the northern portion of the rest area (see Photographs 1 and 2). The Caltrans Maintenance representative stated that an oil water separator BMP had been installed at this location because it drained directly into Shasta Lake. However, site plans or maintenance activity schedules were not produced to confirm that the treatment BMP was installed at this location.

<p>Site Photographs</p>	<p>Caltrans MS4 (SWRCB Order No. 99-06-DWQ) Obrien Rest Area Caltrans District 2</p>	<p>Photograph Date: 10/13/2009</p>
--------------------------------	--	------------------------------------



Photograph 1 – Visible sheen entering storm drain



Photograph 2 – Storm drain from Photograph 1

Site Visit No. 26

Lake Boulevard Temporary Storage Site
Site Visit Date: 10/13/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lake Boulevard Temporary Storage Site
Caltrans District 2**

The EPA Audit Team conducted a site visit at a temporary storage site facility located near the intersection of Interstate 5 and Highway 299 in Redding, CA. Caltrans operates this site for the temporary storage of construction and roadway building materials.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. BMPs had not been implemented at the site to prevent the discharge from stockpiles and there was a potential for the contribution of pollutants to storm water runoff (see Photographs 1 and 2). Although the facility had a Faircloth skimmer treatment BMP installed at the southern portion of the site, the stockpiles were located adjacent to a drainage ditch on the western portion of the site which flows into a down-gradient storm drain along Highway 299 (see Photograph 3). BMPs were not implemented to prevent the discharge of material and debris to the storm drain inlet located adjacent to the temporary storage site (see Photograph 4

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lake Boulevard Temporary Storage Site
Caltrans District 2

Photograph Date: 10/13/2009

No BMPs for storage
piles



Photograph 1 – View of stockpiles

Photograph 2 – Lack of BMPs to contain stockpiled materials

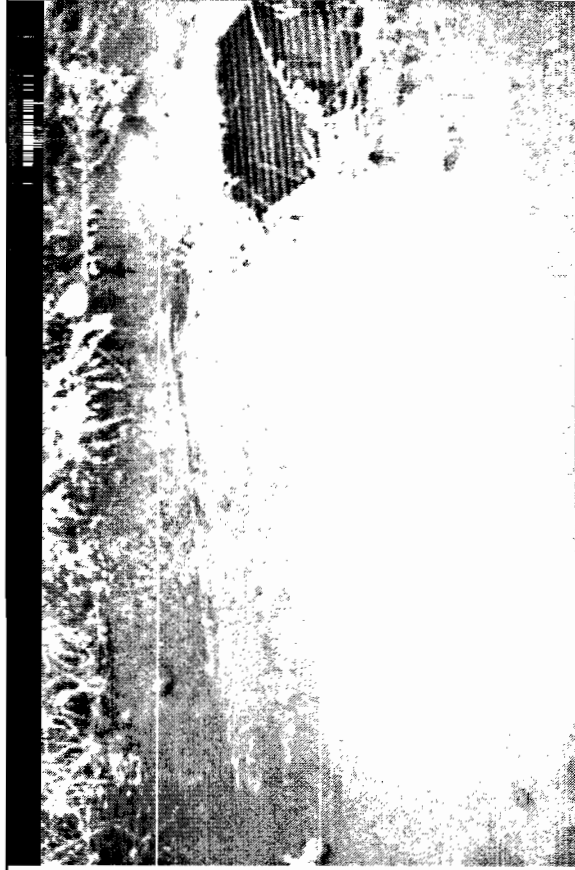


Drainage ditch flowing
to storm drain



Photograph 3 – View of Photograph 2 stockpile proximity to drainage ditch

Photograph 4 – Storm drain inlet adjacent to temporary storage area



Site Visit No. 27

Colusa Temporary Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Colusa Temporary Storage Site
Caltrans District 3**

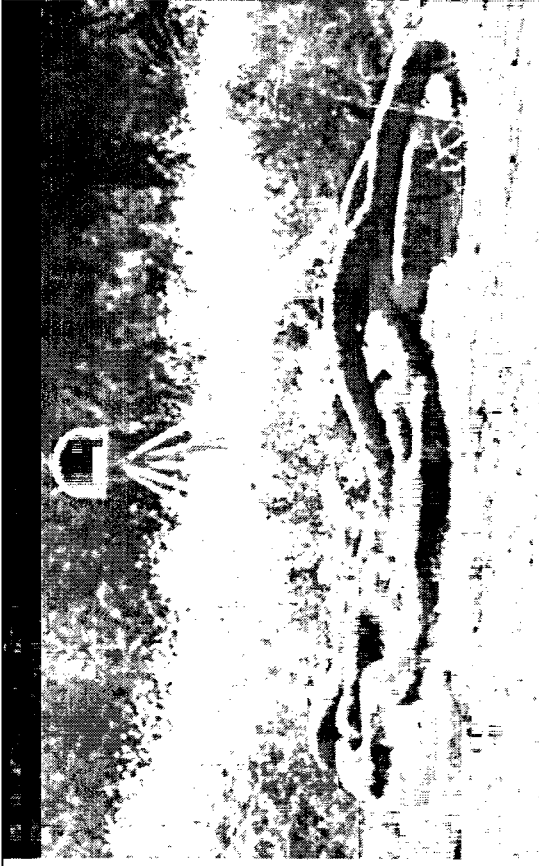
The EPA Audit Team conducted a site visit at a temporary storage site located near the Colusa Maintenance Yard in Colusa, CA. Caltrans operates this site for the temporary storage of tree trimming waste before it is loaded into a truck and hauled to a landfill for disposal.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Despite the storage of BMPs at the site (see Photograph 1), BMPs had not been implemented for soil stockpiles and there was a potential for the contribution of pollutants to storm water runoff (see Photograph 2).

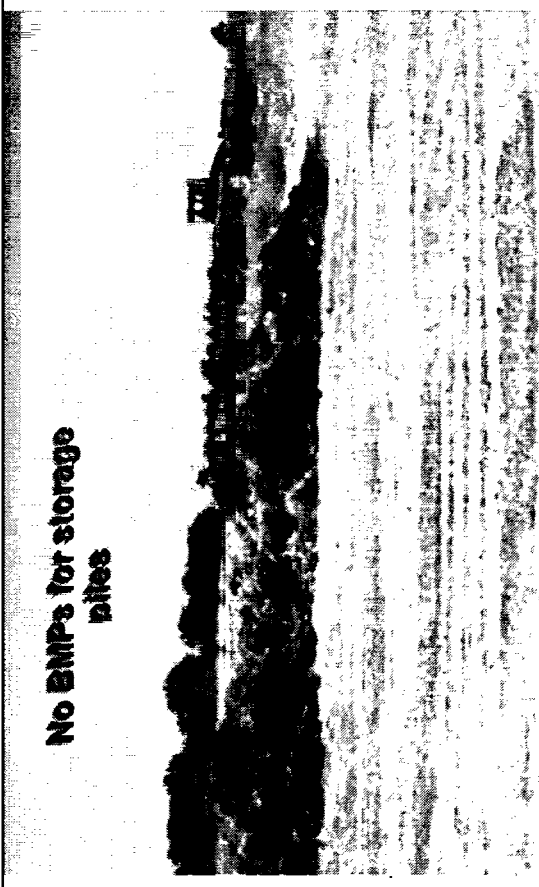
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Colusa Temporary Storage Site
Caltrans District 3

Photograph date: 10/07/2009



Photograph 1 – View of BMP stockpile



Photograph 2 – Lack of BMPs to contain stockpiled soils from tree removal



Photograph 3 – View of tree trimming debris